

Invitation for Bid

Improvements to Marble Farm Homestead

Town of Maynard,
Massachusetts 01754



Originally Issued: March 23, 2022

Bids Due: April 19, 2022

Prepared for the Town of Maynard by:

CBA Landscape Architects LLC
24 Thorndike Street, Cambridge MA 02141



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IMPROVEMENTS TO MARBLE FARM HOMESTEAD Town of Maynard, Massachusetts

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NOTE: Bidders shall check the attached documents with the above list to verify all parts are included before submitting a bid.

TOWN OF MAYNARD, MA
INVITATION TO BID

IMPROVEMENTS TO MARBLE FARM HOMESTEAD

The Town of Maynard Department of Public Works invites sealed bids for **Improvements to Marble Farm Homestead** located at Rockland Ave. and Acton St. in Maynard, MA. The work under this Contract includes the reorganization of the core parking/playground portion of the park, utility upgrades and lighting, and improvements to the pond perimeter pathways and natural areas. All work occurs in the Town of Maynard, Massachusetts.

Wage rates have been determined by the Commissioner of Labor and Industries under the provisions of Massachusetts General Laws Chapter 149, Sections 26 to 27F and shall be made part of this contract.

All bids for this project are subject to applicable public bidding laws of Massachusetts, including, but not limited to G.L. c.30, §39M.

Bids will be received only at the **Town of Maynard, Department of Public Works Office, 195 Main Street, Maynard, MA** by 10:00 AM April 19, 2022. Sealed envelopes containing bids must be clearly marked with name and address of Bidder, the description of the contract "**Marble Farm Homestead**" and addressed to the Department of Public Works.

These Services must be accompanied by a bid security consisting of a BID BOND or CERTIFIED CHECK issued by a responsible bank or trust company in the amount of 5% of the bid price. The successful bidder is required to furnish a 50% payment bond.

Bids will be received at the Town of Maynard, Department of Public Works Office, 195 Main Street, Maynard, MA until **10:00 A.M. on April 19, 2022** at which time they will be publicly opened by the Town authority.

Specifications are available at www.accentblueprints.com starting March 23, 2022.

The bidder agrees that its bid shall be good and may not be withdrawn for a period of 30 days, Saturdays, Sundays and legal holidays excluded, after the opening of the bids.

The Town reserves the right to waive any informalities, to accept or reject, in whole or in part any or all bids, or take whatever other action may be deemed to be in the best interest of the Town.

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**SECTION 00 20 00
INSTRUCTIONS TO BIDDERS**

TOWN OF MAYNARD

I. INSTRUCTIONS FOR BIDDERS

1. GENERAL

- 1.1 The Town of Maynard invites sealed bids for **Improvements to Marble Farm Homestead**, within the Town of Maynard. All work to comply with applicable codes.
- 1.2 The Contractor shall provide all labor, materials, equipment, tools, construction equipment and machinery, transportation and other facilities and services necessary for the proper execution and completion of the work, whether temporary or permanent and whether or not incorporated or to be incorporated in the work. All bids must include all costs associated with the work to be done, including but not limited to overhead, profit, materials, and labor. The Town of Maynard has tax-exempt status.

2. BIDDER'S REPRESENTATION

- 2.1 Each bidder by making a bid represents that;
 - 1.a. The bidder has read and understands the Contract Documents including the terms of the proposed Contract (included as Section 00 50 00) and the bid is made in accordance therewith.
 - 1.b. The bidder is familiar with the local conditions under which the work is to be performed.
 - 1.c. Failure to so examine the Contract Documents and the general conditions will not relieve any Bidder from any obligations under the bid as submitted.
- 2.2 Each bidder by making a bid certifies that this contract has been obtained in good faith and without collusion or fraud with any other person (see Section 00 45 19 contained in 00 41 00, Bid Submission Packet).

3. REQUEST FOR INTERPRETATIONS

- 3.1 Bidders shall promptly notify the Town of Maynard of any ambiguity, error or inconsistency, which they may discover upon examination of the Contract Documents, the site, and the local conditions. All such notification must be made more than 72 hours before bids are to be opened in order to be considered.
- 3.2 Primary contacts for technical issues or questions are:

D.J. Chagnon, ASLA CPSI, CBA Landscape Architects LLC, dj@cbaland.com
AND
Justin DeMarco, Director of Public Works, jdemarco@townofmaynard.net

- 3.3 Interpretations, correction, or change in the Contract Documents will be made by Addendum which will be part of the Contract Documents. The Town of Maynard will not be held accountable for any oral instructions.
- 3.4 Neither the Town nor the Designer assumes any responsibility for any conclusion or interpretations made by any Bidder based on the information made available by the Bidding Documents, nor does the Town or the Designer assume any responsibility for any understanding reached or representation made about conditions which may affect the cost, schedule, progress, furnishing and performance of the Work, unless that understanding or representation is expressly stated or indicated in the Bidding Documents, including all issued written Addenda.
- 3.5 The Town of Maynard will e-mail addenda to every individual or firm on record as having taken a set of Contract Documents. Copies of the Addenda will be made available for inspection at the Town of Maynard Department of Public Works, 195 Main Street, Maynard, MA 01754 and on-line at www.accentblueprints.com.

4. PREPARATION OF BIDS

- 4.1 Bids shall be submitted on the "Bid Submission Packet" furnished in the Contract Documents as Section 00 41 00 and its subsection forms 00 41 01 through 00 45 50.
- 4.2 Bid sheet shall be filled in by typewriter or ink.

5. BONDING

- 5.1 The bids must be accompanied by bid security in the form of a certified check, a bid bond, or a treasurer's or cashier's check, payable to the Town of Maynard, in the amount of five (5) percent of the value of the bid. Such security of general bidders will be returned to all except the three lowest responsible and eligible bidders within five days, Saturdays, Sundays, and legal holidays excluded, after the opening of bids, and the remaining securities will be returned promptly after the Owner and the accepted bidder have executed the Contract, or if no notice of intent to award has been presented to the selected contractor within 30 days, Saturdays, Sundays and holidays excluded, after the date of the opening of bids, upon demand of the bidder at any time thereafter.
- 5.2 Successful bidders for contract services are required to furnish a 50% payment bond.

6. INSURANCE

- 6.1 The successful bidder for contract services must provide the following insurance documentation:
 - 6.1.1 Workers' Compensation in accordance with state law
 - 6.1.2 Comprehensive General Liability, Comprehensive Automobile Liability and Property Damage Insurance in the amount of not less than \$1,000,000 each occurrence and \$2,000,000 aggregate limit.
 - 6.1.3 The Town must be named as an "additional insured" on a certification of insurance filed with the Office of the Town Administrator. The Contractor shall provide a copy of

additional insured endorsements for all policies that require the Town to be listed as an additional insured.

7. TAXES

- 7.1 The Town of Maynard is exempt from the payment of Massachusetts Sales Tax. The Contractor will be provided a Certificate of Exemption number at the time of execution of the Contract.
- 7.2 Each bidder shall furnish a completed Tax Compliance Certificate with its bid (see Section 00 45 17 contained in 00 41 00, Bid Submission Packet).

8. CORPORATE BIDDERS

- 8.1 If the bidder is a corporation, a Certificate As To Corporate Bidder and a Certificate of Vote (see Section 00 45 43.01 and .02, contained in 00 41 00, Bid Submission Packet) shall be submitted with the bid.

9. PREVAILING WAGE LAW

- 9.1 Services shall be provided using wage rates determined by the Commissioner of Labor and Industries under the provisions of Massachusetts General Laws Chapter 149, Sections 26 to 27F shall be made part of this contract. Prevailing Wage information is enclosed in Section 00 73 43.

10. SUBMISSION OF BIDS

- 10.1 Envelopes containing the Bid must be sealed, plainly marked with name of the bidder, the description of the contract, and addressed to the Department of Public Works, with the following marked on the outside:

BID FOR: **Improvements to Marble Farm Homestead**

(Bidder's Name and Business Address)

- 10.2 Bids must include the following completed submittals (Found in 00 41 00, Bid Submission Packet):

Bid Cover Sheet and Reference List
Form for Bid
Bid Bond Form
Unit Price Form
Certification of Massachusetts Tax Compliance
Certificate of Non-Collusion
Certificate as to Corporate Bidder and Certificate of Authority
Public Contractor Non-Debarment and OSHA Compliance Certifications

- 10.3 Bids will be received only at the Town of Maynard, Department of Public Works office, 195 Main Street, Maynard, MA.
- 10.4 Date and time of receipt of bids is set forth in the Invitation to Bid.

- 10.5 Timely delivery of a bid at the location designated shall be the responsibility solely of the Bidder.

11. WITHDRAWAL OF BIDS

- 11.1 Any bid may be withdrawn prior to the time designated for receipt of bids over the signature of the Bidder by written notice post-marked on or before the date and time set for receipt of bids.
- 11.2 Withdrawn bids may not be resubmitted after the bid closing date and time.
- 11.3 No bid of the three lowest bidders shall be withdrawn within thirty days, Saturdays, Sundays, and legal holidays excluded, after the bid opening.

12. AWARD

- 12.1 The Town of Maynard reserves the right to waive any informalities in or to reject any or all general bids if it be in the public interest to do so.
- 12.2 Successful bidders will be required to provide Certificates of Insurance and Bonds prior to Contract execution. Return of executed Contract (sample shown in Section 00 50 00) shall serve as Notice of Award.
- 12.3 The Town of Maynard reserves the right to make an award within thirty (30) days from the bid opening date to the lowest responsible and eligible bidder as determined by the Town of Maynard. The Town of Maynard may request and review submittal information prior to awarding a Contract.
- 12.4 As used herein, the term "lowest responsible and eligible bidder" shall mean the Bidder whose bid is the lowest and of those Bidders demonstrably possessing the skill, ability and integrity necessary for the faithful performance of the work in compliance with the Contract Documents.
- 12.5 Work covered herein is non-exclusive and the Town may elect to assign work to others at its discretion. The Town reserves the right to terminate this contract at anytime and for any reason after giving 30 days written termination notice to the Contractor.
- 12.6 No portion of Work performed under this contract may be sub-contracted out to other parties by the Contractor without the expressed written consent of the Town of Maynard Department of Public Works Director.

13. SCHEDULING AND PENALTIES

- 13.1 The CONTRACTOR shall proceed with the Contract work on a continuous basis until complete unless directed differently by the OWNER.
- 13.2 Work shall be substantially complete by 60 calendar days after Notice to Proceed. Substantial completion shall mean: Either the Work has been completed except for Work items representing less than one percent (1%) of the adjusted Contract Price, or completed and opened to public use except for minor incomplete or unsatisfactory items that do not materially impair the usefulness of the Work required by the Contract.

13.3 Final completion shall be by 90 calendar days after Notice to Proceed.

14. REFERENCES

14.1 Furnish with your proposal a list of references. (Included in the Bid Submission Packet, Section 00 41 00.)

14.2 List name of References, a minimum of three recent jobs performed by you of similar size Park Improvement Projects of similar scope installed. Include a customer contact name and phone number. Quality workmanship as attested to by your references will be an important consideration in determining the winning bidder.

15. ALLOWANCES

15.1 The bidder is required to include, in the Lump Sum Bid Price, Allowances for certain items of indeterminate cost as stipulated in Section 01 21 00, Allowances. Attention is directed to that section of the Specifications for further information.

15.2 Should the projected cost of the applicable work item covered by an Allowance exceed the dollar value of the Allowance, the Contractor shall notify the Owner promptly and not proceed with that item of the Work until such time as the Owner has issued written approval for the expected increase in cost.

15.3 Upon confirmation of the final cost of the items covered by the Allowances, the Contractor and the Town shall adjust the final Contract Price as appropriate to reflect the final approved cost of the applicable section of work, subject to the terms of 01 21 00.

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BID SUBMISSION PACKET

1. Please ensure all proposal forms are complete. The following items are required as part of your submission:

- ☐ Section 00 41 01 – Bid Cover Sheet and Reference List
- ☐ Section 00 41 13 – Form for Bid
- ☐ Section 00 43 13 – Bid Bond Form
- ☐ Section 00 43 22 – Unit Price Form
- ☐ Section 00 45 17 – Certification of Massachusetts Tax Compliance
- ☐ Section 00 45 19 – Certificate of Non-Collusion
- ☐ Section 00 45 43 – Certificate as to Corporate Bidder and Certificate of Authority
- ☐ Section 00 45 50 – Public Contractor Non-Debarment and OSHA Compliance Certifications
- ☐ 5% Bid Deposit

2. Bids shall be submitted on the Bid Forms furnished herein. The Bid shall be completely filled in, signed, enclosed in an envelope, sealed, and plainly marked with the Bidder's name, address, and telephone number and the name of the Project. Bids will be valid only when accompanied by a bid deposit in accordance with the requirements of Section 00 20 00, Article 5. The Bid shall be filed with the **Town of Maynard** Department of Public Works, 195 Main Street, Maynard, MA. The Bid shall be filed before the stipulated time on the date stipulated in the Advertisement. Bids received after precisely the stipulated time will not be accepted and will be returned unopened.

3. Bids shall be for the complete work as specified. The Bidder shall be selected on the basis of such Bids.

4. Every Bid shall be accompanied by a bid deposit in the form and amount specified in Section 00 20 00, Article 5.

5. A labor and materials payment bond, of a surety company licensed by the Division of Insurance to do surety business in the Commonwealth of Massachusetts and included on the U.S. Treasury list of approved sureties (see Circular 570), and satisfactory to the **Town**, in the sum of **50%** of the Contract Price, will be required of the successful Bidder.

6. Subject to the provisions in paragraph 14.5.1, and the requirements of the Bidding Documents, if the **Town** elects to award the contract, the **Town** will award it to the lowest responsible and eligible Bidder who submits a Bid, without conditions or exceptions, which conforms in all material respects with the requirements of the Bidding Documents, as determined solely by the **Town's** and the **Designer's** evaluation of the Bid Form, Bid Form Attachments and Bidder-provided documents.

7. Determination of the lowest Bidder shall be on the basis of the sum of the Base Bid and any Alternates accepted by the **Town**.

8. Upon evaluation of the Bids of those Bidders remaining for consideration for the award, if the **Town** disqualifies any Bidder for the award, the **Town** will give written notice of the disqualification to that Bidder.

9. Except in circumstances leading to a determination obviously in error or inconsistent with the Bidding Documents, discrepancies or non-conformance on the Bid Form shall be resolved as follows: (a) between words and figures, the written words are binding on the Bidder, (b) between any sum, indicated by the Bidder, and the correct sum, the correct sum is binding on the Bidder; (c) between the product, indicated by the Bidder, of any quantity and bid unit price and the correct multiplication of the unit price times the quantity of Unit Price Work, the unit price bid is binding on the Bidder, and (d) if a Bidder fails or neglects to enter a Bid price in both words and figures, the Bid price entered, whether in words or figures, will be binding on the Bidder.

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TOWN OF Maynard
BID SHEET

Project: **IMPROVEMENTS TO MARBLE FARM HOMESTEAD**
Bids Due: **April 19, 2022 by 10:00 AM**

The Town reserves the right to reject any and all bids. In addition, the Town reserves the right to reject the bid of the successful bidder if they cannot at any time meet the Town's schedule or requirements and to award the bid to the next lowest bidder.

Pursuant to G.L. c.62C, §49A, I certify hereby in writing, under penalties of perjury, that the within named Bidder/Contractor has complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting of child support.

The undersigned Bidder hereby certifies under penalties of perjury, as follows: (1) that he/she is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration.

The undersigned certifies under penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this paragraph the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

The undersigned bidder hereby certifies, under pains and penalties of perjury, that the foregoing bid is based upon the payment to laborers to be employed on the project of wages in an amount no less than the applicable prevailing wage rates established for the project by the Massachusetts Department of Labor and Workforce Development. The undersigned bidder agrees to indemnify the awarding authority for, from and against any loss, expense, damages, actions or claims, including any expense incurred in connection with any delay or stoppage of the project work arising out of or as a result of (1) the failure of the said bid to be based upon the payment of the said applicable prevailing wage rates or (2) the failure of the bidder, if selected as the contractor, to pay laborers employed on the project the said applicable prevailing wage rates.

This bid includes the work under the original specification, as well as, all addenda issued up to and including _____. (contractor to write in Addenda number)

COMPANY _____

ADDRESS _____

TELEPHONE NUMBER _____

EMAIL _____

SIGNED BY _____

PRINTED NAME AND TITLE _____

DATE _____

REFERENCE LIST

Please list three similar projects that have been completed.

Owner:
Address:
City,State,Zip:
Contact:
Phone:
Contract Amount:

Owner:
Address:
City,State,Zip:
Contact:
Phone:
Contract Amount:

Owner:
Address:
City,State,Zip:
Contact:
Phone:
Contract Amount:

SECTION 00 41 13: FORM FOR BID

PROJECT TITLE: IMPROVEMENTS TO MARBLE FARM HOMESTEAD, Maynard, MA

CONTRACTOR: _____

CONTRACTOR PHONE NUMBER & EMAIL: _____

TO THE AWARDING AUTHORITY, acting in the name and on behalf of the Town of Maynard:

- A. The undersigned proposes to furnish all labor and materials required for the Project specified above, located in Maynard, Massachusetts, in accordance with the accompanying Contract Documents, plans and specifications prepared by the Town of Maynard and their consultant:

for the Contract Price specified below, subject to additions and deductions, according to the terms of the Contract Documents. **The Contract Price includes all Allowances as outlined in Section 01 21 00.**

- B. The bidder acknowledges the following addendum / addenda: _____
Maynard

- C. The proposed Base Bid Contract Price (Grand Total written in words) is: _____
_____ DOLLARS (\$ _____)

- D. The following are ALTERNATES which, if adopted by the Town, shall either increase or decrease the Contractor's base bid contract price and lump sum bid. The Town reserves the right to determine the lowest eligible bidder on the basis of the base bid or the adoption of the ALTERNATES, selected in order, and in combination with the base bid. (For example: Base Bid, Base Bid + Alternate 1) **See Specifications Section 01 23 00, Alternates, for instructions.**

<u>FOR ALTERNATE NO.</u>	<u>ADD</u>
1 – ADD the furnishing and installation of the custom interpretive signage (metal frame, footing, and HPL or Fiberglass-Embedded Graphic Panel) and DEDUCT the relocation and reinstallation of the salvaged existing sign post as shown on sheet L2.0 and Detail 3/L5.1	\$ _____ <u>Written:</u> _____
2 – ADD the furnishing and installation of the recycled plastic timber boardwalk/bridge and associated surfacing and footings as shown on Sheets L2.0, L3.1, L4.0, and Detail 5/L5.0	\$ _____ <u>Written:</u> _____
3 – ADD the furnishing and installation of four (4) bicycle racks, associated footings, and the indicated area of stabilized stone dust paving, and ADD the indicated associated removals as necessary, as shown on Sheets L1.0, L2.0, L3.1, L3.2, L4.0, and Details 1/L5.0 and 4/L5.1	\$ _____ <u>Written:</u> _____

E. The undersigned agrees that if s/he is selected as the Contractor, s/he will within ten (10) days, Saturday, Sunday and legal holidays excluded, after presentation thereof by the **Awarding Authority**, execute a Contract in accordance with the terms of this Bid and furnish a labor and materials payment bond, of a surety company licensed to do business under the laws of the Commonwealth; appearing on the U.S. Treasury List of Approved Sureties; satisfactory to the **Awarding Authority**; and in the sum of fifty percent (50%) of the Contract Price, the premiums for which are to be paid by the Contractor and are included in the Contract Price.

F. The undersigned hereby certifies that s/he is able to furnish labor that can work in harmony with all elements of labor employed or to be employed on the Work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least ten (10) hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that s/he will comply fully with all laws and regulations applicable to awards made subject to M.G.L. 30, §39M.

G. Names and addresses of all persons interested in this bid, as principals other than the undersigned, are as follows:

H. The Bidder is (a/an) _____
(Indicate: Individual, Partnership, Corporation, Joint Venture, or Trust)

1. If the Bidder is a Partnership, state names and residential addresses of all partners:

2. If Bidder is a Corporation, complete the following:

Corporation is incorporated in the State of _____

President: _____

Treasurer: _____

Place of Business: _____
(Street, City, and State)

(a) If the Bidder is a Foreign Corporation, also complete the following:

The Power of Attorney required by M.G.L. Laws, Chapter 181, Section 4, was filed on:

The Certificate and copy of its Charter, Articles of Incorporation required by M.G.L. Chapter 181, Section 4, were filed on:

3. If the Bidder is a Joint Venture, state the names and business addresses of each person, firm, or company that is party to the joint venture:

A copy of the Joint Venture Agreement will be delivered to the Award Authority on request, and is on file at:

4. If the Bidder is a Trust, state the names and residential addresses of all Trustees:

The Trust Documents will be delivered to the Award Authority on request, and are on file at:

5. List here, or attach a separate sheet listing all ongoing projects, and projects completed within the past three years on which you served as General Contractor, and the name of the Designer or Owner's Representative:

<u>Project</u>	<u>Designer/Owners Rep.</u>	<u>Tel. No.</u>	<u>Contract Amount</u>
			\$
			\$
			\$

6. Bank References: _____

7. If the business is conducted under any title other than the real name of the owner, state the time when and place where the Certificate required by M.G.L. Chapter 110, Section 5, was filed:

8. The Federal Social Security Identification Number of the Bidder (the number used on Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941) is:

- I. The undersigned offers the following information as evidence of his/her qualifications to perform the work as bid upon according to all requirements of the plans and specifications:

1. Have been in business under present business name _____ years.

2. Ever failed to complete any work awarded? _____ Explain:

3. Has your organization been restructured or operated under a different name in the past three (3) years?

a. What was the name of the company?

b. What was the reason for the restructuring or name change?

c. If your company was restructured due to financial hardships or challenges, please explain the circumstances:

The undersigned further certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provisions of M.G.L. Chapter 29, Section 29F, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated there under.

Date: _____

Name of Bidder: _____

Signature: _____
(Name of Individual Signing Bid and Title)

Business Address: _____

Business Phone: _____ Home Phone: _____

Do you have any answering service: Yes _____ No _____

**END OF SECTION 00 41 13
FORM FOR BID**

SECTION 00 43 13: BID BOND FORM

TOWN OF MAYNARD, OFFICE OF THE TOWN ADMINISTRATOR

KNOW ALL PERSONS BY THESE PRESENTS

That _____
of _____,
as **PRINCIPAL**, and _____,

a _____ Corporation, as **SURETY**, are held firmly bound unto the Town of Maynard, acting by and through its Office of the Town Administrator, as **OBLIGEE** in the sum of

_____ Dollars (\$ _____), for the payment of which sum, well and truly to be made, the **PRINCIPAL** and **SURETY** bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the **PRINCIPAL** has submitted a bid for _____

NOW, THEREFORE THE CONDITION OF THIS OBLIGATION is such that if the bid of the aforesaid **PRINCIPAL** shall be awarded the Contract for the above-cited project, the **PRINCIPAL** will enter into a Contract with the **OBLIGEE** in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, then this **OBLIGATION** shall be null and void. **OTHERWISE**, the **PRINCIPAL** and **SURETY** will pay unto the **OBLIGEE** the difference in money between the amount of the bid of the said **PRINCIPAL** and the amount for which the **OBLIGEE** legally contracts with another party to perform the work covered by said bid, if the latter amount be in excess of the former, but in no event shall liability exceed the penal sum hereof.

IN WITNESS WHEREOF, the parties have signed, sealed and delivered this instrument at Maynard, MA this

_____ day of _____, 20____.

(Name of **PRINCIPAL**) (Affix Corporate Seal HERE)

(Signature/Title of **PRINCIPAL**)

(Name of **SURETY**) (Affix Corporate Seal HERE)

(Attorney-in-Fact)

[Attach Power of Attorney to this page]

**END OF SECTION 00 43 13
BID BOND FORM**

SECTION 00 45 17

CERTIFICATE OF COMPLIANCE WITH
MASSACHUSETTS TAX LAWS

Pursuant to Massachusetts General Law Chapter 62C, Section 49A, the undersigned acting on behalf of the Contractor*, certify under penalties of perjury that to the best knowledge and belief, the Contractor* is in compliance with all laws of the Commonwealth relating to taxes, reporting of employee and contractors, and withholding and remitting child support.

Individual

Signature Date

Name (please print or type) Social Security Number

Corporate

Corporate Name (please print or type)

Signature of Corporate Officer Date

Name of Corporate Officer (please print or type) Title

Taxpayer Identification Number

1. As used in this certification, the word "Contractor" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

SECTION 00 45 19

Town of Maynard, Massachusetts

CERTIFICATE OF NON-COLLUSION

REVENUE ENFORCEMENT AND PROTECTION ACT

Massachusetts General Laws, Chapter 701 of the Acts of 1983, requires that each bidder must certify as follows:

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word “person” shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Signature of individual submitting bid or proposal

Name of Business (please type or print)

SECTION 00 45 43.01

CERTIFICATE AS TO CORPORATE BIDDER

I _____
certify that I am _____ of the
Corporation named as Bidder in the within Bid Form that
_____ who signed
said Bid Form on behalf of the Bidder was then
_____ of said Corporation; that I know his signature and
that his signature hereto is genuine and that said Bid Form was duly signed, sealed, and
executed for and on behalf of said Corporation by authority of its Board of Directors.

(Corporate Seal)

(Signature)

(Title)

This Certificate must be completed where the Bidder is a Corporation, and should be so completed by its Clerk. In the event that the Clerk is the person signing the Proposal on behalf of the Corporation, this Certificate must be completed by another Officer of the Corporation.

SECTION 00 45 43.02

CERTIFICATE OF AUTHORITY

At a duly authorized meeting of the Board of Directors of the

_____ held on _____
(Name of Corporation) (Date)

it was voted that:

_____ (Name) _____ (Officer)

Of this company, be and he/she hereby is authorized to execute contracts and bonds in the name and on behalf of said company, and affix its corporate seal hereto; and such execution of any contract or obligation in this company's name on its behalf by such _____ under seal of the company,
(Officer)

Shall be valid and binding upon this company.

A true copy,

ATTEST: _____

TITLE: _____

PLACE OF BUSINESS: _____

DATE OF THIS CONTRACT: _____

I hereby certify that I am the clerk of the _____
(Name of Corporation)

And that _____ is duly elected _____
(NAME) (POSITION)

Of said company, and that the above vote has not been amended or rescinded and remains in full force and effect as of the date of this contract.

(CLERK)
CORPORATE SEAL:

SECTION 00 45 50

PUBLIC CONTRACTOR DEBARMENT

The undersigned certifies under penalty of perjury that the below named contractor is not presently debarred from doing public construction work in the commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

OSHA TRAINING

Pursuant to G.L. c. 30, §39S, the Contractor hereby certifies under penalties of perjury as follows:

Contractor is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work;

All employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and they shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and

All employees to be employed in the work subject to this contract have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration.

COMPLETE AND SIGN BELOW:

Authorized Person's Signature

Date

Print Name & Title of Signatory

Name of Contractor

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**SECTION 00 50 00
SAMPLE CONTRACT**

TOWN OF MAYNARD¹

CONTRACT # _____

STATE CONTRACT # (if applicable) _____

DATE: _____

This Contract is entered into on, or as of, this date by and between the Town of Maynard, 195 Main Street, Maynard, MA 01754 (the "Town"), and

["Contractor"]

[Contact Name for Responsible Person]

[Address of the Contractor]

[Telephone Number]

[FAX Number]

[email address]

1. This is a Contract for the procurement of the following:

(Describe the work to be performed or attach agreed-upon scope of services)

2. The Contract price to be paid to the Contractor by the Town is:

3. Payment will be made as follows:

3.1 If any portion of the contract price is to be paid by a private citizen(s) no work shall be performed until a sum has been deposited with the Town Treasurer, upon an estimate made by the board, committee or officer having charge of the work, sufficient to cover the payment for the portion of the said work chargeable to the private citizen(s).

¹ Construction under \$250k

3.2 Fees and Reimbursable Costs combined shall not exceed \$_____ as more fully set forth in the Contractor Documents.

3.3 There shall be no further costs, fees or reimbursable charges due the Contractor under this Contract unless said fees and/or costs are so set forth in writing. The Town will not pay any surcharge or premium on top of the direct out of pocket expenses, if any.

4. Security:

Contract Price	Performance Bond	Payment Bond	Bid Deposit
Under \$10,000	No	No	No
\$10,000 - \$25,000	No	No	No
\$25,001 - \$50,000	No	50% of total contract price ²	No
\$50,001 - \$150,000 ³	No	50% of total contract price	5% of total bid
Over \$150,000 ⁴	100% of contract price	100% of contract price	5% of total bid

5. Definitions:

- 5.1 **Acceptance:** All Contracts require proper acceptance of the described goods or services by the Town. Proper acceptance shall be understood to include inspection of goods and certification of acceptable performance for services by authorized representatives of the Town to ensure that the goods or services are complete and are as specified in the Contract.
- 5.2 **Contract Documents:** All documents relative to the Contract including (where used) Request for Proposals and all attachments thereto, Instructions to Bidders, Proposal Form, General Conditions, Supplementary General Conditions, General Specifications, Other Specifications included in Project Manual, Drawings, all Addenda issued during the bidding period and Contractor's Response to the Request for Proposal. The Contract documents are complementary, and what is called for by any one shall be as binding as if called for by all. The intention of the document is to include all labor and materials, equipment and transportation necessary for the proper performance of the Contract.
- 5.3 **The Contractor:** The "other party" to any Contract with the Town. This term shall (as the sense and particular Contract so require) include Vendor, Contractor, Engineer, or other label used to identify the other party in the particular Contract. Use of the term "Contractor" shall be understood to refer to any other such label used.

² As required by MGL c. 149, § 29 for Building Construction Contracts as well as Public Works (Non-Building) Construction Contracts (with Labor) subject to MGL c. 30, § 39M, or MGL c. 30B, § 5.

³ This \$150,000 threshold is applicable to only Building Construction Contracts subject to MGL c. 149, but not to Public Works (Non-Building) Construction Contracts (with Labor) subject to MGL c. 30, § 39M, that are more than \$50,000. This row applies to all Public Works Contracts subject to MGL c. 30, § 39M, that are greater than \$50,000.

⁴ The requirements of this row only apply to for Building Construction Contracts subject MGL c. 149, but not for Public Works (Non-Building) Construction Contracts (with Labor) subject to MGL c. 30, § 39M, or MGL c. 30B, § 5.

- 5.4 Date of Substantial Performance: The date when the work is sufficiently complete, the services are performed, or the goods delivered, in accordance with Contract documents, as modified by approved Amendments and Change Orders.
- 5.5 Goods: Goods, Supplies, Services or Materials.
- 5.6 Subcontractor: Those having a direct Contract with the Contractor. The term includes one who furnished material worked to a special design according to the Drawings or Specifications of this work, but does not include one who merely furnishes material not so worked.
- 5.7 Work: The services or materials contracted for, or both.

6. Term of Contract and Time for Performance:

This Contract shall be fully performed by the Contractor in accordance with the provisions of the Contract Documents on or before _____, unless extended, in writing, at the sole discretion of the Town, and not subject to assent by the Contractor, and subject to the availability and appropriation of funds as certified by the Town Accountant. Time is of the essence for the completion of the Contract.

7. Subject to Appropriation:

Notwithstanding anything in the Contract documents to the contrary, any and all payments which the Town is required to make under this Contract shall be subject to appropriation or other availability of funds as certified by the Town Accountant. In the absence of appropriation or availability as certified herein, this Contract shall be immediately terminated without liability for damages, penalties or other charges to the Town. In the event this is a multi-year contract, this Contract shall be subject to annual appropriation and in the event funds are not so appropriated, this Contract shall terminate immediately without liability for damages, penalties or charges to the Town.

8. Permits and Approvals:

Permits, Licenses, Approvals and all other legal or administrative prerequisites to its performance of the Contract shall be secured and paid for by the Contractor.

9. Termination and Default:

- 9.1 Without Cause. The Town may terminate this Contract on seven (7) calendar days' notice when in the Town's sole discretion it determines it is in the best interests of the Town to do so, by providing notice to the Contractor, which shall be in writing and shall be deemed delivered and received when given in person to the Contractor, or when received by fax, express mail, certified mail return receipt requested, regular mail postage prepaid or delivered by any other appropriate method evidencing actual receipt by the Contractor. Upon termination without cause, Contractor will be paid for services rendered to the date of termination.
- 9.2 For Cause. If the Contractor is determined by the Town to be in default of any term or condition of this Contract, the Town may terminate this Contract on seven (7) days' notice by providing notice to the Contractor, which shall be in writing and shall be deemed delivered and received when given in person to the Contractor, or when received by fax, express mail, certified mail return receipt requested, regular mail postage prepaid or delivered by any other appropriate method evidencing actual receipt by the Contractor.

9.3 Default. The following shall constitute events of a default under the Contract:

(1) any material misrepresentation made by the Contractor to the Town; 2) any failure to perform any of its obligations under this Contract including, but not limited to the following: (i) failure to commence performance of this Contract at the time specified in this Contract due to a reason or circumstance within the Contractor's reasonable control, (ii) failure to perform this Contract with sufficient personnel and equipment or with sufficient material to ensure the completion of this Contract within the specified time due to a reason or circumstance within the Contractor's reasonable control, (iii) failure to perform this Contract in a manner reasonably satisfactory to the Town, (iv) failure to promptly re-perform within a reasonable time the services that were rejected by the Town as unsatisfactory, or erroneous, (v) discontinuance of the services for reasons not beyond the Contractor's reasonable control, (vi) failure to comply with a material term of this Contract, including, but not limited to, the provision of insurance and non-discrimination, (vii) any other acts specifically and expressly stated in this Contract as constituting a basis for termination of this Contract, and (viii) failure to comply with any and all requirements of state law and/or regulations, and Town bylaw and/or regulations.

10. Suspension or Delay

The Town may order the Contractor, in writing, to suspend, delay or interrupt all or any part of the Services without cause for such period of time as the Town may determine to be appropriate for its convenience. In the event of any such suspension, delay or interruption, the Contractor's time for performance may be equitably adjusted. No adjustment shall be made if the Contractor is or otherwise would have been responsible for the suspension, delay or interruption of the Services, or if another provision of this Contract is applied to render an equitable adjustment.

11. The Contractor's Breach and the Town's Remedies:

Failure of the Contractor to comply with any of the terms or conditions of this Contract shall be deemed a material breach of this Contract, and the Town of Maynard shall have all the rights and remedies provided in the Contract documents, the right to cancel, terminate, or suspend the Contract in whole or in part, the right to maintain any and all actions at law or in equity or other proceedings with respect to a breach of this Contract, including "Damages" including but not limited to costs, attorney's fees or other damages resulting from said breach ("Damages") as well as specific performance, and the right to select among the remedies available to it by all of the above.

From any sums due to the Contractor for services, the Town may keep the whole or any part of the amount for expenses, losses and Damages incurred by the Town as a consequence of procuring services as a result of any failure, omission or mistake of the Contractor in providing services as provided in this Contract.

12. Statutory Compliance:

- 12.1 This Contract will be construed and governed by the provisions of applicable federal, state and local laws and regulations; and wherever any provision of the Contract or Contract documents shall conflict with any provision or requirement of federal, state or local law or regulation, then the provisions of law and regulation shall control. Where applicable to the Contract, the provisions of the General Laws are incorporated by reference into this Contract, including, but not limited to, the following:

General Laws Chapter 30B – Procurement of Goods and Services.

General Laws Chapter 30, Sec. 39, *et seq.* - Public Works Contracts.

General Laws Chapter 149, Section 44A, *et seq.* Public Buildings Contracts.

- 12.2 Wherever applicable law mandates the inclusion of any term and provision into a municipal contract, this Section shall be understood to import such term or provision into this Contract. To whatever extent any provision of this Contract shall be inconsistent with any law or regulation limiting the power or liability of cities and towns, such law or regulation shall control.
- 12.3 The Contractor shall comply with all Federal, State and local laws, rules, wage regulations, policies and orders applicable to the Work provided pursuant to this Contract, such provisions being incorporated herein by reference, and shall be responsible for obtaining all necessary licenses, permits, and approvals required for the supply of such Work.

The Contractor shall indemnify and hold the Town harmless for and against any and all fines, penalties or monetary liabilities incurred by the Town as a result of the failure of the Contractor to comply with the previous sentence. If any discrepancy or inconsistency is discovered in the Drawings, Specifications or Contract for this work in violation of any such law, by-law, regulation, order or decree, it shall forthwith report the same in writing to the Town. It shall, at all times, itself observe and comply with all such existing and future laws, by-laws, regulations, orders and decrees; and shall protect and indemnify the Town, and its duly appointed agents against any claim or liability arising from or based on any violation whether by him or its agents, employees or subcontractors of any such law, by-law, regulation or decree.

13. Conflict of Interest:

Both the Town and the Contractor acknowledge the provisions of the State Conflict of Interest Law (General Laws Chapter 268A), and this Contract expressly prohibits any activity which shall constitute a violation of that law. The Contractor shall be deemed to have investigated the application of M.G.L. c. 268A to the performance of this Contract; and by executing the Contract documents the Contractor certifies to the Town that neither it nor its agents, employees, or subcontractors are thereby in violation of General Laws Chapter 268A.

14. Certification of Tax Compliance

This Contract must include a certification of tax compliance by the Contractor, as required by General Laws Chapter 62C, Section 49A (Requirement of Tax Compliance by All Contractors Providing Goods, Services, or Real Estate Space to the Commonwealth or Subdivision).

15. Non-Discrimination/Affirmative Action

The Contractor shall carry out the obligations of this Agreement in compliance with all requirements imposed by or pursuant to federal, State and local ordinances, statutes, rules and regulations and policies prohibiting discrimination in employment, including but not limited to, Title VII of the Civil Rights Act of 1964; the Age Discrimination in Employment Act of 1967; Section 504 of the Rehabilitation Act of 1973 and Mass. G. L. c. 151B, and any other executive orders, rules, regulations, requirements and policies relating thereto enacted by the Commonwealth of Massachusetts and the Town as they may be amended from time to time. Contractor shall not discriminate against any qualified employee or applicant for employment because

of race, color, national origin, ancestry, age, sex, religion, physical or mental handicap or sexual orientation.

15.1 As used in this section “affirmative action” means positive steps to ensure all qualified persons equal employment opportunity without regard to race, color, religion, sex or national origin at all stages of the employment process: recruitment, selection, placement, promotion, training, layoff and termination. It may include, but is not limited to, the following:

- (a) Inclusion in all solicitation and advertisements for employees of a statement that the Contractor is an “Equal Opportunity Employer”;
- (b) Placement of solicitations and advertisements for employees in media that reaches minority groups;
- (c) Notification in writing of all recruitment sources that the Contractor solicits the referral of applicants without regard to race, color, religion, sex or national origin;
- (d) Direct solicitation of the support of responsible and appropriate community, state and federal agencies to assist recruitment efforts;
- (e) Participation in, or establishment of, apprenticeship or training programs where outside programs are inadequate or unavailable to minority groups;
- (f) Modification of collective bargaining agreements to eliminate restrictive barriers established by dual lines of seniority, dual rates of pay or dual lines of promotion or progression which are based on race, color, religion, sex or national origin; and
- (g) Review selection, placement, promotion, training, layoff and termination procedures and requirements to ensure that they do not intentionally or unintentionally discriminate against qualified persons because of race, color, religion, sex or national origin.

15.2 The Contractor, if applicable, shall include in all compliance and progress reports submitted to the town a report which shall include: (a) A certificate stating that he or she is currently in compliance with the provisions of G.L. c. 152B and setting forth the Affirmative Action he or she is currently undertaking and will undertake during the contract period to provide equal employment opportunity for all qualified persons without regard to race, color, religion, sex or national origin; and (b) A statement in writing supporting information signed by an authorized officer or agent on behalf of any labor union or other agency which refers workers or provides or supervises apprenticeship or other training programs which the Contractor deals, to the effect that the union or other agency’s practices and policies do not discriminate on the basis of race, color, religion, sex or national origin; provided, in the event that the union or other agency shall refuse to execute such a statement, the Contractor need only so certify in writing.

15.3 A copy of any such report as described above, shall be filed in the office of the Town Clerk and shall upon said filing become a public record.

15.4 The Contractor will take Affirmative Action to ensure that employees are solicited and employed, and that employees are treated during employment, without regard to race, color, religion, sex or national origin.

15.5 The Contractor will in all solicitation or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

15.6 In determining whether steps taken by the Contractor constitute Affirmative Action, the Town shall take into account the relevant characteristics of the Contractor including, but not limited to, the number of employees and the location of the principal and branch offices.

16. Assignment:

The Contractor shall not assign, sublet or otherwise transfer this Agreement, in whole or in part, without the prior written consent of the Town, and shall not assign any of the moneys payable under this Contract, except by and with the written consent of the Town.

17. Condition of Enforceability Against the Town:

This Contract is only binding upon, and enforceable against, the Town if: (1) the Contract is signed by the Board of Selectmen or its designee; and (2) endorsed with approval by the Town Accountant as to appropriation or availability of funds; and (3) endorsed with approval by the Town Counsel as to form.

18. Corporate Contractor:

If the Contractor is a corporation, it shall endorse upon this Contract (or attach hereto) its Clerk's Certificate certifying the corporate capacity and authority of the party signing this Contract for the corporation. Such certificate shall be accompanied by a letter or other instrument stating that such authority continues in full force and effect as of the date the Contract is executed by the Contractor. This Contract shall not be enforceable against the Town of Maynard unless and until the Contractor complies with this section.

The Contractor, if a foreign corporation, shall file with the Commissioner of Corporations a Power of Attorney and duly authenticated copies of its Charter or Certificate of Incorporation; and said Contractor shall comply with all the laws of the Commonwealth.

19. Contractor's Personnel:

The Contractor shall utilize only its employees and shall not utilize any third-party contractors without prior written approval of the Town.

20. Liability of Public Officials:

To the full extent permitted by law, no official, employee, agent or representative of the Town of Maynard shall be individually or personally liable on any obligation of the Town under this Contract.

21. Indemnification:

The Contractor shall indemnify, defend and save harmless the Town, the Town's officers, agents and employees, from and against any and all damages, liabilities, actions, suits, proceedings, claims, demands, losses, costs, expenses, recoveries and judgments of every nature and description (including attorneys' fees) that may arise in whole or in part out of or in connection with the work being performed or to be performed, or out of any act or omission by the Contractor, its employees, agents, subcontractors, material men, and anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by any party indemnified hereunder. The Contractor further agrees to reimburse the Town for damage to its property caused by the Contractor, its employees, agents, subcontractors or material men, and anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, including damages caused by his, its or their use of faulty, defective, or unsuitable material or equipment, unless the damage is caused by the Town's gross negligence or willful misconduct.

- 21.1 The Contractor further agrees to indemnify and hold harmless the Town, including the agents, employees and representatives of either, from and against all claims, damages, losses and expenses, including attorney's fees, arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.
- 21.2 The Contractor shall be responsible for all damage or injury to property of any character during the prosecution of the work resulting from any act, omission, neglect, or misconduct in the manner or method of executing the work or due to the non-execution of the work or at any time due to defective work or materials.
- 21.3 In any and all claims against the town or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this paragraph shall not be limited in anyway by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workmen's Compensation Acts, disability benefit acts or other employee benefit acts.
- 21.4 The Contractor hereby assumes the entire responsibility and liability for any and all injury to or death of any or all persons, including the Contractor's employees, and for any and all damage to property caused by, resulting from or arising in whole or in part out of any act, omission, or neglect on the part of the Contractor or of any Subcontractor or of anyone directly or indirectly employed by any of them, or of anyone for whose acts any of them may be liable in connection with operations under the Contract.

The foregoing provisions shall not be deemed to be released, waived, limit or modified in any respect by reason of any surety or insurance provided by the Contractor under the Contract.

22. Insurance

22.1 Workers Compensation Insurance:

The Contractor shall provide by insurance for the payment of compensation and the furnishing of other benefits under Chapter 152 of the General Laws of Massachusetts (The Worker's Compensation Act) to all employees of the Contractor who are subject to the provisions of Chapter 152 of the General Laws of Massachusetts.

Failure to provide and continue in force such insurance during the period of this Contract shall be deemed a material breach of this Contract, shall operate as an immediate termination thereof, and Contractor shall indemnify the Town for all losses, claims, and actions resulting from the failure to provide the insurance required by this Article.

The Contractor shall furnish to the Town a certificate evidencing such insurance prior to the execution of this Contract before the same shall be binding on the parties thereto, except if specifically waived by the Town.

22.2 Professional Liability Insurance

Liability of \$1 million per claim and \$3 million aggregate.

Failure to provide and continue in force such insurance during the period of this Contract shall be deemed a material breach of this Contract, shall operate as an immediate termination thereof, and Contractor shall indemnify the Town for all losses, claims, and actions resulting from the failure to provide the insurance required by this Article.

22.3 Other Insurance Requirements

- a. Comprehensive commercial general liability insurance with limits of at least \$1 Million per occurrence and \$3 Million annual aggregate for property damage and \$1 Million per person and \$3 Million per occurrence for bodily injury, which shall include the Town of Maynard as an additional insured, and which shall cover bodily injury, sickness or disease, or death of any person including employees and those persons other than the Contractor's employees, and claims insured by usual personal liability coverage, death, or property damage arising out of the Work including injury or destruction of tangible property, including loss of use resulting therefrom.
- b. Motor vehicle insurance for any motor vehicles used in performing the Work, with limits of at least \$500,000 per person, and \$1 Million per accident.
- c. The intent of the Specifications regarding insurance is to specify minimum coverage and minimum limits of liability acceptable under the Contract. However, it shall be the Contractor's responsibility to purchase and maintain insurance of such character and in such amounts as will adequately protect it and the Town from and against all claims, damages, losses and expenses resulting from exposure to any casualty liability in the performance of the work, including and not limited to Professional liability insurance where applicable.
- d. All policies shall identify the Town as an additional insured (except Workers' Compensation and Professional Liability). The Contractor shall notify the Town immediately upon the cancellation or amendment to any policy. Renewal Certificates shall be filed with the Town at least ten (10) days prior to the expiration of the required policies. Certificates evidencing all such coverage shall be provided to the Town upon the execution of this Agreement, and upon the renewal of any such coverage. Each such certificate shall specifically refer to this Contract and shall state that such insurance is as required by this Contract. **Failure to provide the notices required in this Section or to continue in force such insurance shall be deemed a material breach of this Contract and shall be grounds for immediate termination.** Said insurance shall include: Workers Compensation/Employers' Liability Insurance, Business Automobile Liability Insurance, and Commercial General Liability Insurance (CGL). The CGL policy shall include coverage for liability arising from premises, operations, independent Contractors, personal injury, contractual liability. All Certificates of Insurance shall be on the "MIIA" or "ACORD" Certificate of Insurance form, shall contain true transcripts from the policies, authenticated by the proper officer of the Insurer, evidencing in particular those insured, the extent of coverage, the location and operations to which the insurance applies, the expiration date and the above-mentioned notice clauses. All insurance shall be written on an occurrence basis. Coverage shall be maintained without interruption from date of the Contract until date of final payment and termination of any coverage required to be maintained after payment.
- e. The Contractor shall obtain and maintain during the term of this Contract the insurance coverage in companies licensed to do business in the Commonwealth of Massachusetts and acceptable to the Town.

23. Documents, Materials, Etc.

Any materials, reports, information, data, etc. given to or prepared or assembled by the Contractor under this Contract are to be kept confidential and shall not be made available to any individual or organization by the Contractor (except agents, servants, or employees of the Contractor) without the prior written approval of the Town, except as otherwise required by law. The Contractor shall comply with the provisions Chapter 66A of the General Laws of Massachusetts as it relates to public documents, and all other state and federal laws and regulations relating to confidentiality, security, privacy and use of confidential data.

Any materials produced in whole or in part under this Contract shall not be subject to copyright, except by the Town, in the United States or any other country. The Town shall have unrestricted authority to, without payment of any royalty, commission, or additional fee of any type or nature, publicly disclose, reproduce, distribute and otherwise use, and authorize others to use, in whole or in part, any reports, data or other materials prepared under this Contract.

All data, reports, programs, software, equipment, furnishings, and any other documentation or product paid for by the Town shall vest in the Town at the termination of this Contract. The Contractor shall at all times, during or after termination of this Contract, obtain the prior written approval of the Town before making any statement bearing on the work performed or data collected under this Contract to the press or issues any material for publication through any medium.

24. No Employment

The Contractor acknowledges and agrees that it is acting as an independent Contractor for all services rendered pursuant to this Contract, and neither the Contractor, nor its employees, agents, servants nor any person for whose conduct the Contractor is responsible shall be considered an employee or agent of the Town for any purpose and shall not file any claim or bring any action for any worker's compensation unemployment benefits and compensation for which they may otherwise be eligible as a Town employee as a result of work performed pursuant to the terms of this Contract.

25. Audit, Inspection and Recordkeeping

At any time during normal business hours, and as often as the Town may deem it reasonably necessary, there shall be available in the office of the Contractor for the purpose of audit, examination, and/or to make excerpts or transcript all records, contracts, invoices, materials, payrolls, records of personnel, conditions of employment and other data relating to all matters covered by this Agreement.

26. Payment

The Town agrees to make all reasonable efforts to pay to the Contractor the sum set forth in the Contractor's bid or proposal within thirty (30) days of receipt of an invoice detailing the work completed and acceptance from the Town of the work completed.

27. Waiver and Amendment

Amendments, or waivers of any additional term, condition, covenant, duty or obligation contained in this Contract may be made only by written amendment executed by all signatories to the original Agreement, prior to the effective date of the amendment.

To the extent allowed by law, any conditions, duties, and obligations contained in this Contract may be waived only by written Agreement by both parties.

Forbearance or indulgence in any form or manner by a party shall not be construed as a waiver, nor in any manner limit the legal or equitable remedies available to that party. No waiver by either party of any default or breach shall constitute a waiver of any subsequent default or breach of a similar or different matter.

28. Severability

If any term or condition of this Contract or any application thereof shall to any extent be held invalid, illegal or unenforceable by the court of competent jurisdiction, the validity, legality, and enforceability of the remaining terms and conditions of this Contract shall not be deemed affected thereby unless one or both parties would be substantially or materially prejudiced.

29. Forum and Choice of Law

This Contract and any performance herein shall be governed by and be construed in accordance with the laws of the Commonwealth. Any and all proceedings or actions relating to subject matter herein shall be brought and maintained in the courts of the Commonwealth or the federal district court sitting in the Commonwealth, which shall have exclusive jurisdiction thereof. This paragraph shall not be construed to limit any other legal rights of the parties.

30. Notices

Any notice permitted or required under the provisions of this Contract to be given or served by either of the parties hereto upon the other party hereto shall be in writing and signed in the name or on the behalf of the party giving or serving the same. Notice shall be deemed to have been received at the time of actual service or three (3) business days after the date of a certified or registered mailing properly addressed. Notice to the Contractor shall be deemed sufficient if sent to the address set forth on page 1 or furnished from time to time in writing hereafter.

31. Binding on Successors:

This Contract is binding upon the parties hereto, their successors, assigns and legal representatives (and where not corporate, the heirs and estate of the Contractor). Neither the Town nor the Contractor shall assign or transfer any interest in the Contract without the written consent of the other.

32. Entire Agreement:

This Contract, including all documents incorporated herein by reference, constitutes the entire integrated agreement between the parties with respect to the matters described. This Contract supersedes all prior agreements, negotiations and representations, either written or oral, and it shall not be modified or amended except by a written document executed by the parties hereto.

IN WITNESS WHEREOF the parties have hereto and to two other identical instruments set forth their hands and executed this as an instrument under seal this the day and year first above written.

The Town of Maynard by
the Board of Selectmen:

The Contractor by:

Signature Date

Print Name & Title

Certified as to Form:

Town Counsel Date

Certified as to
Appropriation/Availability of Funds:

Town Accountant Date

Chief Procurement Officer Date

CERTIFICATION OF GOOD FAITH

The undersigned certifies under pains and penalties of perjury that this contract has been obtained in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

The Contractor by:

Print Name

Title/Authority

CERTIFICATE OF STATE TAX COMPLIANCE

Pursuant to Massachusetts General Laws, Chapter 62C, Section 49A

_____, authorized signatory for
name of signatory

_____, whose
name of contractor

principal place of business is at _____,

_____ does hereby certify under the pains and penalties of perjury that
_____ has paid all

name of contractor

Massachusetts taxes and has complied with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

Signature

Date

Name

Federal Tax ID # or Social Security #

EXAMPLE CLERK'S CERTIFICATE

Action of Shareholders
Written Consent

(Date)

The undersigned, being the Shareholders of _____, a Massachusetts Corporation (the "Corporation") entitled to vote on the action, hereby consent to the adoption of the following votes:

VOTED: That the [President and/or the Vice President or named individual], each of them acting singly is, authorized to execute any and all contract documents and to enter into and negotiate the terms of all contracts and to accomplish same and to execute any and all documents, instruments, and agreements in order to effectuate the transaction and that said transaction shall be valid, binding, effective, and legally enforceable.

VOTED: That the officers are, and each of them acting singly is, authorized, from time to time, in the name and on behalf of the Corporation to take or cause to be taken all such action(s) as s/he or they, as the case may be, deem necessary, appropriate or advisable to effect the foregoing votes, as may be shown by the officer or officers execution or performance which shall be conclusive evidence that the same is authorized by the directors of this Corporation.

VOTED: That the officers are, and each of them acting singly is, authorized, from time to time, in the name and on behalf of this Corporation, under its corporate seal, if desired, attested by an appropriate officer, if desired, to execute, make oath to, acknowledge, deliver and file any and all of the agreements, instruments, certificates and documents referred to or related to the foregoing votes.

VOTED: That the officers are, and each of them acting singly is, authorized, from time to time and on behalf of this Corporation, under its corporate seal, if desired, to execute, acknowledge and deliver any and all agreements, instruments, certificates and documents referred to or related to the foregoing votes, with such changes as the officer or officers so acting may deem necessary or desirable, and the signature of such officer or officers to be conclusive evidence that the same is authorized by the directors of this Corporation.

Clerk of Corporation Certificate

I, _____ the Clerk of the foregoing corporation, do hereby certify that the above vote was taken at a duly called meeting of the shareholders of the Corporation on _____, 20__.

Clerk of Corporation

SEAL

**CONTRACT CHECKLIST
(FOR TOWN USE)**

Initials

1. Certification of Signatures _____
 - For Corporation: need President's signature or Clerk's Certificate dated no more than 2 years ago With Corporate Seal affixed (see above form)
 - For LLC: need Manager signature or signed vote of the LLC
2. Certificate of Non-collusion _____
3. Insurance Certificate _____
(showing Town as additional insured)
 - Matches amount of insurance required under contract
4. Certificate of Good Faith _____
5. Certificate of Tax Compliance _____
6. Signed by Contractor _____
 - Matches certification by Corp officer of authority.
7. Certificate of Good Standing for Corporation or Certificate of Legal Existence for LLC both from the Secretary of State _____

Contract Reviewed by: _____
Signature

Name, Title

SUPPLEMENT “C”

[] CONSTRUCTION

SUPPLEMENT “C” - Applicable to Contracts for the construction of:

(1) Public Buildings and Public Works

(governed by the provisions of General Laws Chapter 30B);

(2) Public Buildings

(governed by the provisions of General Laws Chapter 149, § 44A, et seq.); and

(3) Public Works

(governed by the provisions of General Laws Chapter 30, §39M, et seq)

1. This form supplements the Town of Maynard “Contract and General Conditions” and applies only to contracts for the construction, reconstruction, alteration, remodeling or repair of public works or public buildings.
2. Wherever the law requires one contracting with a city or town to be bonded, such obligation shall be understood to be a term and condition of this Contract. The Contractor agrees to secure such bonds (where required) in the form required by the Town and provide an original thereof to the Town prior to the commencement of performance.
3. Equality:
 - 3.1. In the case of a closed Specification written for a specific item or items to be furnished under the Base Bid, such specifications shall, as applicable, be in compliance with the Massachusetts General Laws, Chapter 30, Section 39M and Chapter 149, Sec. 44A et seq.
 - 3.2. Where the name of an item, material or manufacturer is mentioned in the Specifications or on the Drawings, except as above noted, the intent is to establish a standard and in no way should be construed to exclude any item or manufacturer not mentioned by name, but whose product meets the Specifications as to design, utility and quality. Final decision shall rest solely with the Town’s Project Representative (herein after “Project Representative”) as to its acceptability.
4. Change Orders:
 - 4.1. Change orders must receive the approval of the Town Administrator and the appropriate Department or Division Head and must be supported by the project engineers and architects, if any.
 - 4.2. Change orders to contracts governed by General Laws Chapter 30B may not increase the quantity of goods or services provided by more than twenty-five (25%) per cent, in compliance with Sec. 13 of Chapter 30B.
5. The Contractor will carry out the obligations of this contract in full compliance with all of the requirements imposed by or pursuant to General Laws Chapter 151, Sec. 1, et seq. (Minimum Wage Law) and any executive orders, rules, regulations, and requirements of the Commonwealth of

Massachusetts as they may from time to time be amended. The Contractor will at all times comply with the wage rates as determined by the Commissioner of the Department of Labor and Industries, under the provisions of General Laws Chapter 149, Sections 26 and 27D (Prevailing Wage), as shall be in force and as amended.

6. The Contractor shall continuously maintain adequate protection of all work from damage and shall protect the property of the Town and others, including adjacent property, from injury or loss arising in connection with the Contract. The Contractor shall make good any such damage, injury or loss, except as may be directly due to errors in the Contract Documents or caused by agents or employees of the Town, or due to causes beyond the Contractor's control and not the Contractor's fault or negligence.
7. The Contractor shall take all necessary precautions for the safety of employees on the work, and shall comply with all applicable provisions of Federal, State and local laws and codes to prevent accidents or injury to persons on, about or adjacent to the premises where the work is being performed. The Contractor will erect and properly maintain at all times, as required by the conditions and progress of the work, all necessary safeguards for the protection of workers and the public, shall post danger signs warning against the hazards created by such features of construction such as pits, protruding nails, hosts, well holes, elevator hatchways, scaffolding, window openings, stairways and falling materials; and shall designate a responsible member of its organization on the work, whose duty shall be the prevention of accidents.
8. The Town shall at all times have access to the work wherever it is in preparation or progress and the Contractor shall provide suitable accommodations for such access.
9. The Contractor shall appoint a competent superintendent and foreman and any necessary assistants, all of whom shall be satisfactory to the Town. If the Town in its sole discretion determines that the construction superintendent, foreman, or assistants are unacceptable to the Town, then upon seven days' notice from the Town, the Contractor shall replace such person or persons with people acceptable to the Town.
10. The Contractor shall give efficient supervision to the work, using its best skill and attention. The Contractor shall carefully study and compare the drawings, specifications and other instructions and shall at once report to the Town any error, inconsistency or omission which shall be discovered. Included in this responsibility shall be supervision of all work performed by subcontractors on the work.
11. Notwithstanding any other provision of this Contract to the contrary, if the Contractor should neglect to prosecute the work properly, or fail to perform the contract or any of its provisions, the Town, upon three days' written notice, may, without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.
12. Inspection by the Town's Project Representative
 - 12.1. The Town shall have the right to designate a Project Representative who may make periodic visits to the site to familiarize the Town generally with the progress and quality of the work, and to determine in general if the work is proceeding in accordance with the Contract Documents. The Project Representative will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work, and will not be responsible for the Contractor's failure to carry out the construction work in accordance with the Contract Documents. During such visits and on the basis of these observations while at the site, the Project Representative will keep the Town informed on the progress of the work, will

endeavor to guard the Town against defects and deficiencies in the work of contractors, and may condemn structural work as failing to conform to the Contract Documents. The Project Representative shall have authority to act on behalf of the Town only to the extent expressly delegated by the Town, which shall be shown to the Contractor, and shall have authority to stop the work whenever such stoppage may reasonably be necessary to insure the proper execution of the Contract.

- 12.2. In connection with the work, the Project Representative shall not be responsible for construction methods, means, techniques, sequences or procedures employed by the Contractor or the Contractor's safety programs, requirements, regulations, or precautions.

13. Decisions of the Project Representative

- 13.1. The Project Representative shall, within a reasonable time, make decisions on all claims of the Town or the Contractor and on all other matters relating to the execution and progress of the structural work or the interpretation of the Contract Documents.
- 13.2. The Project Representative's decision, in matters relating to the project, shall be final, if within the terms of the Contract Documents.
- 13.3. If, however, the Project Representative fails to render a decision within ten days after the parties have presented their evidence, either party may then avail itself of the remedies provided in this Contract or available to it by law. If the Project Representative renders a decision after such remedies have commenced, such decision may be entered as evidence but shall not disturb or interrupt such proceedings except where such decision is acceptable to the parties concerned.

14.1 Use of Premises by the Contractor:

- 14.1. The Contractor shall confine its apparatus, the storage of materials and the operations of its workmen to limits indicated by law, by-laws, permits or directions of the Town and shall not unreasonably encumber the premises with its materials.
- 14.2. The Contractor shall not load or permit any part of the structure to be loaded with a weight that will endanger its safety.

15. Maintenance of Premises:

The Contractor shall at all times keep the premises free from accumulation of waste materials or rubbish caused by its employees or work, and at the completion of the work it shall remove all its rubbish from and about the work site and all its tools, scaffolding and surplus materials and shall leave its work "broom-clean", or its equivalent, unless more exactly specified. In case of dispute, the Town may remove the rubbish and charge the cost to the several contractors, as the Town shall determine to be just.

16. Right to Terminate

- 16.1 In addition to any other remedies herein provided and notwithstanding any other provisions hereof to the contrary, if the Contractor should (1) be adjudged a bankrupt, (2) make a general assignment for the benefit of creditors, (3) have a receiver appointed on account of its insolvency, (4) persistently or repeatedly refuse or fail to supply enough personnel and resources to perform the contract, (5) fail to make prompt payment to subcontractors or to providers of materials or labor, (6) persistently disregard laws and regulations or lawful directives of the Town, or (7) be guilty of a substantial violation of any provision of the Contract, then the Town may, without prejudice to any other right or remedy and after giving the Contractor (or any surety) seven (7) days written notice, terminate the contract and the employment of the Contractor and take possession of the premises and of all materials, tools and appliances thereon and finish the work by whatever method it deems appropriate.
- 16.2 In such cases, the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid amount owed to the Contractor for work already completed shall exceed the expense of finishing the work, including compensation for additional architectural, managerial, legal and administrative services, such excess shall be paid to the Contractor. If such expenses shall exceed such unpaid balances, the Contractor shall pay the difference to the Town.
- 16.3 The Contractor shall not be relieved of liability to the Town by virtue of any termination of this Contract, and any claim for damages against the Contractor relating to the Contractor's performance under this contract shall survive any termination hereunder.

Notwithstanding any other provision of this Agreement, the Town reserves the right at any time in its absolute discretion to suspend or terminate this Agreement in whole or in part for its convenience upon seven (7) days' written notice to the Contractor. The Town shall incur no liability by reason of such termination except for the obligation to pay compensation for all work performed by the Contractor and accepted by the Town to the termination date.

17. Progress Payments:

- 17.1. The Contractor shall, before the first application for payment, submit to the Town a schedule of values of the various parts of the work, including quantities aggregating the total sum of the Contract, divided so as to facilitate payments to Subcontractors, made out in such form as the Town and the Contractor may agree upon, and, if required, supported by such evidence as to its correctness. This schedule, when approved by the Town, shall be used as a basis for payment, unless it is found to be in error. If applying for payments, the Contractor shall submit a statement based upon this schedule.
- 17.2. The Contractor shall submit to the Town an itemized Application for Payment, supported to the extent required by the Town by invoices or other vouchers, showing payments for materials and labor, payments to Subcontractors and such other evidence of the Contractor's right to payment.
- 17.3 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:
- .1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values,

less retainage of five percent (5 %). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included;

.2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of 5 percent (5 %);

.3 Subtract the aggregate of previous payments made by the Town; and

.4 Subtract amounts, if any, for which the Town has withheld or nullified a Certificate for Payment as provided in Section 18, below.

18. Withholding of Payments

18.1. The Town may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any payment to such extent as may be necessary in its reasonable opinion to protect the Town of Maynard from loss on account of:

18.1.1. Defective work not remedied.

18.1.2. Claims filed or reasonable evidence indicating probable filing of claims.

18.1.3. Failure of the Contractor to make payments properly to Subcontractors or for material or labor.

18.1.4. A reasonable doubt that the Contract can be completed for the balance then unpaid.

18.1.5. Damage to another contractor.

18.1.6. Delays resulting in liquidated damages.

18.2. Withholding of payments shall be in strict compliance with statutory requirements.

19. Claims by Contractor and Liability of Town

19.1 All claims by the Contractor against the Town shall, unless otherwise provided by law, be initiated by a written claim submitted to the Town no later than seven (7) calendar days after the event or the first appearance of the circumstances causing the claim. The claim shall set forth in detail all known facts and circumstances supporting the claim. The Contractor shall continue its performance under this contract regardless of the submission or existence of any claims.

19.2 The limit of liability of the Town under this Agreement is limited to the compensation provided herein for work actually performed, and shall in no event include liability for delays or for incidental, special or consequential damages or lost profits or for damages or loss from causes beyond the Town's reasonable control.

20. Damages for Delay:

The Contractor shall have no claims for any damages, costs, or expenses of any kind or nature, for any suspension, delay, interruption, or acceleration of the work on the part of the Town, architect, or any of their consultants in performing or furnishing any work, or resulting from problems or deficiencies with materials, information, or documentation and/or decisions in connection with the execution of the work. Except as otherwise provided by applicable law, the Contractor's sole remedy for such delay shall be for a claim for an extension of time to the time for contract performance.

21. Liquidated Damages:

Because both parties recognize (1) that the time for completion of this Contract is of the essence, (2) that the Town will suffer loss if the work is not completed within the contract time specified, plus any extension thereof allowed in accordance with the provisions of this contract, and (3) the delays, expense and difficulties involved in a legal proceeding to determine the actual loss suffered by the Town if the work is not completed in time, it is agreed that the Contractor will pay the Town as liquidated damages representing an estimate of delay damages to which the Contractor agrees by entering into this Contract, not as a penalty, the sum of One Thousand Dollars (\$1,000) per day for each calendar day of delay until the work is completed, whether the work is completed by the Contractor or some other person. The Town's right to impose liquidated damages shall in no way prohibit or restrict the Town's right to bring a legal action for damages in lieu of or in addition to its option to impose liquidated damages. The Town may deduct any liquidated damages from money due the Contractor, and if such payment is insufficient to cover the liquidated damages, then the Contractor shall pay the amount due.

22. The Contractors' Mutual Responsibility:

Should the Contractor cause damage to any separate subcontractor on the work, the Contractor agrees, upon due notice, to settle with such contractor by agreement, or by recourse to remedies provided by law or by the provisions of the contract. If such separate contractor sues the Town on account of any damage alleged to have been sustained, the Town shall notify the Contractor, who shall defend such proceedings at the Town's expense and, if any judgment against the Town arises therefrom, the Contractor shall pay or satisfy it and pay all costs incurred by the Town including attorney's fees and related costs of litigation.

23. Separate Contracts:

- 23.1. The Town reserves the right to let other Contracts in connection with this work under similar General Conditions. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate its work with theirs.
- 23.2. If any part of the Contractor's work depends, for proper execution or results, upon the work of any other contractor, the Contractor shall inspect and promptly report to the Town any defects in such work that render it unsuitable for such proper execution and results. Failure of the Contractor to so inspect and report shall constitute an acceptance of the other contractor's work as fit and proper for the reception of its work except as to defects which may develop in the other contractor's work after the execution of its work.

- 23.3. To insure the proper execution of its subsequent work, the Contractor shall measure work already in place and shall at once report to the Town any discrepancy between the executed work and the Drawings.

24. Subcontracts:

- 24.1. All Subcontracts shall be awarded in conformity with the requirements of the General Laws, Commonwealth of Massachusetts, Chapter 149, Sections 44A to 44L, inclusive.
- 24.2. The Contractor agrees that it is as fully responsible to the Town for the acts and omissions of its Subcontractors and of persons either directly or indirectly employed by them, as it is for the acts and omissions of persons directly employed by it.
- 24.3. Nothing contained in the Contract Documents shall create any contractual relationship between any Subcontractor and the Town.

25. Contractor-Subcontractor Relations:

The Contractor agrees to bind every Subcontractor and every Subcontractor agrees to be bound by the terms of the Agreement, the General Conditions of the Contract, the Supplementary General Conditions, the Drawings and Specifications, as far as applicable to its work, including the provisions of the General Laws, Commonwealth of Massachusetts, Chapter 149, Section 44A, et seq.

26. The Contractor's Insurance:

Notwithstanding any other provisions of this Contract to the Contrary and in addition to any requirements set forth in the Contract, the Contractor shall provide and maintain the following insurance:

- 26.1. The Contractor shall purchase and maintain such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the Contract, whether such operations be by itself or by any Subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.

26.2 Liability Insurance Requirements

In addition to the liability insurance requirements set forth in the Contract, the liability insurance shall include all major divisions and shall be on a comprehensive general basis including Premises and Operations, Owners and Contractor's Protective, Products and Completed Operations, and Owned, Non-owned and Hired Motor Vehicles. All such insurance shall be written for not less than any limits of liability required by law, unless otherwise provided in the contract documents. The Contractor's insurance shall include:

Excess Liability	(Umbrella)	\$3,000,000
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Excess Liability (Umbrella) Insurance (Subcontractors) \$1,000,000 or 1.5 times the value of the subcontract, whichever is higher.

- 26.3. The above insurance policies shall also be subject to the following requirements:

25.3.1. Insurance coverage for the Contractor's Comprehensive General Liability, as hereinafter specified under Paragraph entitled "Protective Liability Insurance" shall be written by one and the same insurance company to avoid the expense of duplicate and/or overlapping coverage and to facilitate and expedite the settlement of claims.

25.3.2 All premium costs shall be included in the Contractor's bid.

27. Protective Liability Insurance:

27.1. The Contractor shall purchase and maintain such insurance as described in the preceding paragraph as will protect the Town from claims which may arise from operations under the Contract, including operations performed for the named insureds by independent contractors and general inspection thereof by the named insureds.

27.2. The Contractor shall also purchase and maintain such insurance as will protect the Town against Automobile Non-Ownership Liability in connection with the Contractor's operations under the Contract, whether such operations be by itself or by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

27.3. The limits of liability for coverage required under the Contract shall be as specified within the Contract documents.

27.4 The Town shall be named as an additional insured on the above referenced liability Policies, and the Contractor's insurance shall be the primary coverage. The cost of such insurance, including required endorsements and amendments, shall be the sole responsibility of the Contractor.

28. Liens:

Neither the Final Payment nor any part of the retained percentage shall become due until the Contractor, if required, shall deliver to the Town a complete release of all liens arising out of the Contract, or receipts in full in lieu thereof and, if required in either case, an affidavit that as far as it has knowledge or information, the releases and receipts include all the labor and material for which a lien could be filed. The Contractor shall comply with all statutory provisions of the General Laws of the Commonwealth of Massachusetts with regard to liens, Chapter 254 and 149 as amended (as a minimum requirement).

29. Guarantees:

29.1 The Contractor guarantees and warrants to the Town that all labor furnished under this Contract will be competent to perform the tasks undertaken, that the product of such labor will yield only first-class results, that materials and equipment furnished will be of good quality, new, and of recent manufacture unless otherwise permitted by this Contract, and that the Work will be of good quality, free from faults and defects and in strict conformance with this Contract. All Work not conforming to these requirements may be considered defective.

- 29.2. If at any time any part of the work constructed under the terms of this contract shall in the opinion of the Town Administrator require repairing due to defective work or materials furnished by the Contractor, he may notify the Contractor in writing to make the required repairs. If the Contractor shall neglect to start such repairs within ten days of the date of giving it notice thereof and to complete the same to the satisfaction of the Town Administrator with reasonable dispatch, then the latter may employ other persons to make such repairs. The Town shall charge the expense thereof to the Contractor and may use any moneys still retained to pay for the same, and if such sum is insufficient, the Contractor shall be obligated to pay the balance thereof.
- 29.3. All guarantees and warranties required in the various Sections of the Specifications which originate with a Subcontractor or Manufacturer must be delivered to the Town before final payment to the Contractor may be made for the amount of that subtrade or for the phase of work to which the guarantee or warranty relates. The failure to deliver a required guarantee or warranty shall be held to constitute a failure of the Subcontractor to fully complete his work in accordance with the Contract Documents. The Contractor's obligation to correct work is in addition to, and not in substitution of, such guarantees or warranties as may be required in the various Sections of the Specifications.

**SECTION 00 61 13.13
PERFORMANCE BOND**

Bond No. _____

KNOW ALL MEN BY THESE PRESENT, that we _____ with a place of business at _____ as principal (the "Principal"), and _____, a corporation qualified to do business in the Commonwealth of Massachusetts, with a place of business at _____ as Surety (the "Surety"), are held and firmly bound unto the Town of Medway as Obligee (the "Obligee"), in the sum of _____ lawful money of the United States of America, to be paid to the Obligee, for which payment, well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these present.

WHEREAS, the Principal has assumed and made a contract with the Obligee, bearing the date of _____, and entitled _____ **[Insert Project Name here]**

NOW THE CONDITIONS of this obligation are such that if the Principal and all Subcontractors or Suppliers under said contract shall well and truly keep and perform all the undertakings, covenants, agreement, terms, and conditions of said contract on its part to be kept and performed during the original term of said contract and any extensions thereof that may be granted by the Obligee, with or without notice to the Surety, and during the life and including any guarantee required under the contract, and shall also well and truly keep and perform all the undertakings, covenants, agreements, terms and conditions of any and all duly authorized modifications, alterations, changes or additions. The obligations of the Surety set forth herein shall become null and void only if expressly waived in writing by the Obligee Town of Medway; otherwise such obligations shall remain in full force and virtue.

IN THE EVENT the Contract is abandoned by the Principal, or is terminated by the Obligee, Town of Medway, under the applicable provisions of the contract, the Surety hereby further agrees that the Surety shall, if requested in writing by the Town of Medway promptly take all such actions as is necessary to complete said Contract in accordance with its terms and conditions.

IN WITNESS WHEREOF, the Principal and Surety have hereto set their hands and seals this _____ day of _____, 20____.

PRINCIPAL

SURETY

[Name and Seal]

[Attorney-In-Fact]

[Title]

[Address]

[Phone]

Attest: _____

Attest: _____

The rate of the Bond is _____% of the first \$_____ and _____% for the next \$_____.
The total premium for this Bond is \$_____.

END OF PERFORMANCE BOND

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SECTION 00 61 13.16
PAYMENT BOND FORM

KNOW ALL MEN BY THESE PRESENTS: That we _____

_____ a _____
(Name of Contractor) (Corporation, Partnership, Joint Venture or Individual)

hereinafter called "Principal" and _____ of _____,
(Surety)

State of _____ hereinafter called the "Surety" and licensed by the State
(City and State)

Division of Insurance to do business under the laws of the Commonwealth of
Massachusetts, are held and firmly bound to the City/Town of _____,
Massachusetts, hereinafter called "Owner", in the penal sum of
_____ Dollars (\$) in lawful
money of the United States, for the payment of which sum well and truly to be made, we
bind ourselves, our heirs, executors, administrators and successors, jointly and severally,
firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a
certain contract with the Owner, dated the _____ day of _____,
20____, for the construction described as follows:

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms,
subcontractors, and corporations furnishing materials for or performing labor in the
prosecution of the work provided for in such contract, and any authorized extension or
modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal
and coke, repairs on machinery, equipment and tools, consumed or used in connection with
the construction of such work, and all insurance premiums on said work, and for all labor,
performed in such work whether by subcontractor or otherwise, then this obligation shall be
void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and
agrees that no change, extension of time, alteration or addition to the terms of the contract
or to the work to be performed thereunder or the specifications accompanying the same
shall in any way affect its obligation on this bond, and it does hereby waive notice of any
such change, extension of time, alteration or addition to the terms of this contract or to the
work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor
shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ () counterparts, each
one of which shall be deemed an original, this the _____ day of
_____, 20____.

ATTEST:

Surety

(Attorney-in-Fact) By _____

(Address-Zip Code)

Witness as to Surety

(SEAL)

(Address-Zip Code)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is a Partnership, all partners should execute Bond.

SECTION 00 70 00 GENERAL CONDITIONS

1. SCOPE OF WORK:

- 1.1 The Contractor shall furnish all labor, materials, equipment and insurance to perform all work required for the project known as the **Improvements to Marble Farm Homestead** Project, in strict accordance with the Contract Documents and all related Drawings and Specifications. The said Documents, Specifications, Drawings and any supplemental general conditions are incorporated herein by reference and are made a part of this Agreement. Work includes mobilization, performance of the work, clean-up, and demobilization.

2. WORK AREA

- 2.1 The project area shall be as shown on the Drawings. The Contractor shall confine their activities to the Limits of Work shown on the Drawings except as specifically authorized by the Owner.

3. SCHEDULE

- 3.1 Regular work shall be done during normal working hours, Monday through Friday. Work on any other days or hours must be specifically authorized by the Town of Maynard.
- 3.2 Work is expected to be started and completed within a reasonable time period. Work unreasonably delayed or subject to multiple changes in planned start dates for reasons other than weather will be considered a breach of contract.
- 3.3 Once started, the work shall continue on each successive normal workday until it is completed. Interruptions in work to perform work for other customers shall not be allowed unless explicitly approved by the Town of Maynard/designee in advance.
- 3.4 Police details (if required) will be paid and scheduled by Contractor.
- 3.5 No mandatory Site Meeting before Bid. Bidders are strongly encouraged to perform their own assessment of the site. If Interested in a Site Meeting with a representative of the Owner call or email D.J. Chagnon at dj@cbaland.com or 617-935-3296.

4. CODE REQUIREMENTS

- 4.1 All work shall be executed in accordance with the latest Commonwealth of Massachusetts regulations, local inspection authorities and Occupational Safety and Health Administration (OSHA). It shall be understood that these documents are intended to perform as a guide and that omission of any specific item or failure to mention any local, state or federal requirements or authorities of law specifically shall not relieve the Contractor from full and complete responsibility in furnishing a complete, code compliant and satisfactory installation.

5. SITE MAINTENANCE

- 5.1 The Contractor shall confine his apparatus, the storage of materials and the operations of his/her work to the limits prescribed by the Town of Maynard or its designee and shall not

unreasonably encumber the project site with his materials. The Contractor shall, at all times, fully protect his work and materials from injury or loss by others. Any injury or loss which may occur shall be made without expense to the Town of Maynard. The Contractor shall be responsible for the proper protection of his materials and equipment.

- 5.2 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of each work day, he shall remove all his waste materials and rubbish from and about the Project. All tools, construction equipment, machinery, and surplus materials shall be removed or stored in such a manner as to not create a hazard to wetland area.
- 5.3 At the completion of the work, all grounds shall be restored with loam and seed and/or other materials as required to bring back to original condition except where otherwise approved by Conservation Committee or Town of Maynard /designee.

6. APPROVALS

- 6.1 The Town of Maynard /designee will have the authority to reject work that does not conform to the specifications. The Contractor must use good workmanship in performing work as specified. The Contractor shall promptly correct any work rejected by the Town of Maynard /designee as defective or as failing to conform whether or not completed, and shall correct any work found to be defective or nonconforming within 30 days.
- 6.2 Submit Shop Drawings to the Landscape Architect and the Town of Maynard for review and Approval before purchase any items. For further instructions regarding submittals see Section 01 33 00.
- 6.3 Submit Schedule of Values 5 days after Contract is signed and before Start of work.

END OF SECTION

SECTION 00 73 43 PREVAILING WAGE RATE REQUIREMENTS

In accordance with General Laws Chapter 149, Section 26 through 27F, the Contractor is obligated to comply with the prevailing wage rates established by the Commissioner of the Department of Labor and Workforce Development for mechanics, apprentices, chauffeurs, teamsters and laborers employed on the Project.

Pursuant to Mass. General Laws chapter 149, sections 26 and 27B, the CONTRACTOR shall file weekly certified payroll records with the TOWN for all employees who have worked on the Project. The TOWN and the CONTRACTOR shall preserve said records for a period of not less than three years from the date of completion of the Agreement.

The schedule of applicable prevailing wage rates for the Project, together with a Certificate of Compliance therewith (to be included in the Contract) and sample Weekly Payroll Reporting Forms, are set forth in the following pages.



CHARLES D. BAKER
Governor

KARYN E. POLITO
Lt. Governor

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

Prevailing Wage Rates

As determined by the Director under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

ROSALIN ACOSTA
Secretary
MICHAEL FLANAGAN
Director

Awarding Authority: Town of Maynard
Contract Number: 2022-308 **City/Town:** MAYNARD
Description of Work: The town is in the process of a construction project for the new park at Marble Farm Development. The construction will consist of excavation, landscaping and carpentry.
Job Location: Marble Farm Road, Maynard, MA

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the “Wage Request Number” on all pages of this schedule.
 - An Awarding Authority must request an updated wage schedule from the Department of Labor Standards (“DLS”) if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
 - The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
 - All apprentices working on the project are required to be registered with the Massachusetts Department of Labor Standards, Division of Apprentice Standards (DLS/DAS). Apprentice must keep his/her apprentice identification card on his/her person during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DLS/DAS regardless of whether or not they are registered with any other federal, state, local, or private agency must be paid the journeyworker's rate for the trade.**
 - The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule. Awarding authorities are required to request these updates no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. For multi-year CM AT RISK projects, awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. Contractors are required to obtain the wage schedules from awarding authorities, and to pay no less than these rates to covered workers. The annual update requirement is not applicable to 27F “rental of equipment” contracts.
 - Every contractor or subcontractor which performs construction work on the project is required to submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee’s name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. A sample of a payroll reporting form may be obtained at <http://www.mass.gov/dols/pw>.
 - Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
 - Employees not receiving the prevailing wage rate set forth on the wage schedule may report the violation to the Fair Labor Division of the office of the Attorney General at (617) 727-3465.
 - Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.
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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2021	\$35.95	\$13.41	\$16.01	\$0.00	\$65.37
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2021	\$36.02	\$13.41	\$16.01	\$0.00	\$65.44
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2021	\$36.14	\$13.41	\$16.01	\$0.00	\$65.56
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
AIR TRACK OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2021	\$36.16	\$9.10	\$16.64	\$0.00	\$61.90
	06/01/2022	\$37.06	\$9.10	\$16.64	\$0.00	\$62.80
	12/01/2022	\$37.91	\$9.10	\$16.64	\$0.00	\$63.65
	06/01/2023	\$38.81	\$9.10	\$16.64	\$0.00	\$64.55
	12/01/2023	\$39.71	\$9.10	\$16.64	\$0.00	\$65.45
For apprentice rates see "Apprentice- LABORER"						
AIR TRACK OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2021	\$36.16	\$9.10	\$16.64	\$0.00	\$61.90
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	12/01/2020	\$38.10	\$12.80	\$9.45	\$0.00	\$60.35
ASPHALT RAKER <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
	06/01/2022	\$36.56	\$9.10	\$16.64	\$0.00	\$62.30
	12/01/2022	\$37.41	\$9.10	\$16.64	\$0.00	\$63.15
	06/01/2023	\$38.31	\$9.10	\$16.64	\$0.00	\$64.05
	12/01/2023	\$39.21	\$9.10	\$16.64	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
ASPHALT RAKER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$51.38	\$14.00	\$16.05	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$51.38	\$14.00	\$16.05	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
	06/01/2022	\$36.56	\$9.10	\$16.64	\$0.00	\$62.30
	12/01/2022	\$37.41	\$9.10	\$16.64	\$0.00	\$63.15
	06/01/2023	\$38.31	\$9.10	\$16.64	\$0.00	\$64.05
	12/01/2023	\$39.21	\$9.10	\$16.64	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 2</i>	12/01/2021	\$36.16	\$9.10	\$16.64	\$0.00	\$61.90
	06/01/2022	\$37.06	\$9.10	\$16.64	\$0.00	\$62.80
	12/01/2022	\$37.91	\$9.10	\$16.64	\$0.00	\$63.65
	06/01/2023	\$38.81	\$9.10	\$16.64	\$0.00	\$64.55
	12/01/2023	\$39.71	\$9.10	\$16.64	\$0.00	\$65.45
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i> For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"	12/01/2021	\$36.16	\$9.10	\$16.64	\$0.00	\$61.90
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2020	\$46.10	\$7.07	\$17.98	\$0.00	\$71.15

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$29.97	\$7.07	\$11.69	\$0.00	\$48.73
2	65	\$29.97	\$7.07	\$11.69	\$0.00	\$48.73
3	70	\$32.27	\$7.07	\$12.59	\$0.00	\$51.93
4	75	\$34.58	\$7.07	\$13.49	\$0.00	\$55.14
5	80	\$36.88	\$7.07	\$14.38	\$0.00	\$58.33
6	85	\$39.19	\$7.07	\$15.29	\$0.00	\$61.55
7	90	\$41.49	\$7.07	\$16.18	\$0.00	\$64.74
8	95	\$43.80	\$7.07	\$17.09	\$0.00	\$67.96

Notes:

Apprentice to Journeyworker Ratio:1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING) <i>BRICKLAYERS LOCAL 3 (LOWELL)</i>	02/01/2022	\$55.01	\$11.39	\$21.65	\$0.00	\$88.05
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Apprentice - BRICK/PLASTER/CEMENT MASON - Local 3 Lowell

Effective Date - 02/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.51	\$11.39	\$21.65	\$0.00	\$60.55
2	60	\$33.01	\$11.39	\$21.65	\$0.00	\$66.05
3	70	\$38.51	\$11.39	\$21.65	\$0.00	\$71.55
4	80	\$44.01	\$11.39	\$21.65	\$0.00	\$77.05
5	90	\$49.51	\$11.39	\$21.65	\$0.00	\$82.55

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$50.83	\$14.00	\$16.05	\$0.00	\$80.88
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CAISSON & UNDERPINNING BOTTOM MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2021	\$42.33	\$9.10	\$17.72	\$0.00	\$69.15
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For apprentice rates see "Apprentice- LABORER"

CAISSON & UNDERPINNING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2021	\$41.18	\$9.10	\$17.72	\$0.00	\$68.00
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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2021	\$41.18	\$9.10	\$17.72	\$0.00	\$68.00
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
	06/01/2022	\$36.56	\$9.10	\$16.64	\$0.00	\$62.30
	12/01/2022	\$37.41	\$9.10	\$16.64	\$0.00	\$63.15
	06/01/2023	\$38.31	\$9.10	\$16.64	\$0.00	\$64.05
	12/01/2023	\$39.21	\$9.10	\$16.64	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
CARPENTER <i>CARPENTERS -ZONE 2 (Eastern Massachusetts)</i>	03/01/2022	\$44.53	\$8.68	\$19.97	\$0.00	\$73.18
	09/01/2022	\$45.18	\$8.68	\$19.97	\$0.00	\$73.83
	03/01/2023	\$45.78	\$8.68	\$19.97	\$0.00	\$74.43

Apprentice - CARPENTER - Zone 2 Eastern MA

Effective Date - 03/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.27	\$8.68	\$1.73	\$0.00	\$32.68
2	60	\$26.72	\$8.68	\$1.73	\$0.00	\$37.13
3	70	\$31.17	\$8.68	\$14.78	\$0.00	\$54.63
4	75	\$33.40	\$8.68	\$14.78	\$0.00	\$56.86
5	80	\$35.62	\$8.68	\$16.51	\$0.00	\$60.81
6	80	\$35.62	\$8.68	\$16.51	\$0.00	\$60.81
7	90	\$40.08	\$8.68	\$18.24	\$0.00	\$67.00
8	90	\$40.08	\$8.68	\$18.24	\$0.00	\$67.00

Effective Date - 09/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.59	\$8.68	\$1.73	\$0.00	\$33.00
2	60	\$27.11	\$8.68	\$1.73	\$0.00	\$37.52
3	70	\$31.63	\$8.68	\$14.78	\$0.00	\$55.09
4	75	\$33.89	\$8.68	\$14.78	\$0.00	\$57.35
5	80	\$36.14	\$8.68	\$16.51	\$0.00	\$61.33
6	80	\$36.14	\$8.68	\$16.51	\$0.00	\$61.33
7	90	\$40.66	\$8.68	\$18.24	\$0.00	\$67.58
8	90	\$40.66	\$8.68	\$18.24	\$0.00	\$67.58

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 \$30.45/ 3&4 \$36.57/ 5&6 \$56.36/ 7&8 \$62.54

Apprentice to Journeyworker Ratio:1:5

CARPENTER WOOD FRAME <i>CARPENTERS-ZONE 3 (Wood Frame)</i>	04/01/2021	\$23.16	\$7.21	\$4.80	\$0.00	\$35.17
	04/01/2022	\$23.66	\$7.21	\$4.80	\$0.00	\$35.67
	04/01/2023	\$24.16	\$7.21	\$4.80	\$0.00	\$36.17
All Aspects of New Wood Frame Work						

Classification

Effective Date

Base Wage

Health

Pension

Supplemental
Unemployment

Total Rate

Apprentice - CARPENTER (Wood Frame) - Zone 3**Effective Date - 04/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$13.90	\$7.21	\$0.00	\$0.00	\$21.11
2	60	\$13.90	\$7.21	\$0.00	\$0.00	\$21.11
3	65	\$15.05	\$7.21	\$0.00	\$0.00	\$22.26
4	70	\$16.21	\$7.21	\$0.00	\$0.00	\$23.42
5	75	\$17.37	\$7.21	\$3.80	\$0.00	\$28.38
6	80	\$18.53	\$7.21	\$3.80	\$0.00	\$29.54
7	85	\$19.69	\$7.21	\$3.80	\$0.00	\$30.70
8	90	\$20.84	\$7.21	\$3.80	\$0.00	\$31.85

Effective Date - 04/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$14.20	\$7.21	\$0.00	\$0.00	\$21.41
2	60	\$14.20	\$7.21	\$0.00	\$0.00	\$21.41
3	65	\$15.38	\$7.21	\$0.00	\$0.00	\$22.59
4	70	\$16.56	\$7.21	\$0.00	\$0.00	\$23.77
5	75	\$17.75	\$7.21	\$3.80	\$0.00	\$28.76
6	80	\$18.93	\$7.21	\$3.80	\$0.00	\$29.94
7	85	\$20.11	\$7.21	\$3.80	\$0.00	\$31.12
8	90	\$21.29	\$7.21	\$3.80	\$0.00	\$32.30

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
 Step 1&2 \$17.63/ 3&4 \$19.95/ 5&6 \$27.22/ 7&8 \$29.54

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING

01/01/2020

\$45.23

\$12.75

\$22.41

\$0.62

\$81.01

BRICKLAYERS LOCAL 3 (LOWELL)

Apprentice - CEMENT MASONRY/PLASTERING - Lowell**Effective Date - 01/01/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.62	\$12.75	\$15.41	\$0.00	\$50.78
2	60	\$27.14	\$12.75	\$17.41	\$0.62	\$57.92
3	65	\$29.40	\$12.75	\$18.41	\$0.62	\$61.18
4	70	\$31.66	\$12.75	\$19.41	\$0.62	\$64.44
5	75	\$33.92	\$12.75	\$20.41	\$0.62	\$67.70
6	80	\$36.18	\$12.75	\$21.41	\$0.62	\$70.96
7	90	\$40.71	\$12.75	\$22.41	\$0.62	\$76.49

Notes:

Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.

Apprentice to Journeyworker Ratio:1:3

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CHAIN SAW OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
	06/01/2022	\$36.56	\$9.10	\$16.64	\$0.00	\$62.30
	12/01/2022	\$37.41	\$9.10	\$16.64	\$0.00	\$63.15
	06/01/2023	\$38.31	\$9.10	\$16.64	\$0.00	\$64.05
	12/01/2023	\$39.21	\$9.10	\$16.64	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$52.38	\$14.00	\$16.05	\$0.00	\$82.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$33.69	\$14.00	\$16.05	\$0.00	\$63.74
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2022	\$53.66	\$8.65	\$23.05	\$0.00	\$85.36
	07/01/2022	\$54.86	\$8.65	\$23.05	\$0.00	\$86.56
	01/01/2023	\$56.06	\$8.65	\$23.05	\$0.00	\$87.76
	07/01/2023	\$57.26	\$8.65	\$23.05	\$0.00	\$88.96
	01/01/2024	\$58.46	\$8.65	\$23.05	\$0.00	\$90.16
	07/01/2024	\$59.66	\$8.65	\$23.05	\$0.00	\$91.36
	01/01/2025	\$60.86	\$8.65	\$23.05	\$0.00	\$92.56

Classification
Effective Date
Base Wage
Health
Pension
**Supplemental
Unemployment**
Total Rate
Apprentice - PAINTER Local 35 - BRIDGES/TANKS
Effective Date - 01/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.83	\$8.65	\$0.00	\$0.00	\$35.48
2	55	\$29.51	\$8.65	\$6.27	\$0.00	\$44.43
3	60	\$32.20	\$8.65	\$6.84	\$0.00	\$47.69
4	65	\$34.88	\$8.65	\$7.41	\$0.00	\$50.94
5	70	\$37.56	\$8.65	\$19.63	\$0.00	\$65.84
6	75	\$40.25	\$8.65	\$20.20	\$0.00	\$69.10
7	80	\$42.93	\$8.65	\$20.77	\$0.00	\$72.35
8	90	\$48.29	\$8.65	\$21.91	\$0.00	\$78.85

Effective Date - 07/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.43	\$8.65	\$0.00	\$0.00	\$36.08
2	55	\$30.17	\$8.65	\$6.27	\$0.00	\$45.09
3	60	\$32.92	\$8.65	\$6.84	\$0.00	\$48.41
4	65	\$35.66	\$8.65	\$7.41	\$0.00	\$51.72
5	70	\$38.40	\$8.65	\$19.63	\$0.00	\$66.68
6	75	\$41.15	\$8.65	\$20.20	\$0.00	\$70.00
7	80	\$43.89	\$8.65	\$20.77	\$0.00	\$73.31
8	90	\$49.37	\$8.65	\$21.91	\$0.00	\$79.93

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1
DEMO: ADZEMAN
LABORERS - ZONE 2

12/01/2021	\$41.33	\$9.10	\$17.57	\$0.00	\$68.00
06/01/2022	\$42.33	\$9.10	\$17.57	\$0.00	\$69.00
12/01/2022	\$43.33	\$9.10	\$17.57	\$0.00	\$70.00
06/01/2023	\$44.33	\$9.10	\$17.57	\$0.00	\$71.00
12/01/2023	\$45.58	\$9.10	\$17.57	\$0.00	\$72.25

For apprentice rates see "Apprentice- LABORER"

DEMO: BACKHOE/LOADER/HAMMER OPERATOR
LABORERS - ZONE 2

12/01/2021	\$42.33	\$9.10	\$17.57	\$0.00	\$69.00
06/01/2022	\$43.33	\$9.10	\$17.57	\$0.00	\$70.00
12/01/2022	\$44.33	\$9.10	\$17.57	\$0.00	\$71.00
06/01/2023	\$45.33	\$9.10	\$17.57	\$0.00	\$72.00
12/01/2023	\$46.58	\$9.10	\$17.57	\$0.00	\$73.25

For apprentice rates see "Apprentice- LABORER"

DEMO: BURNERS
LABORERS - ZONE 2

12/01/2021	\$42.08	\$9.10	\$17.57	\$0.00	\$68.75
06/01/2022	\$43.08	\$9.10	\$17.57	\$0.00	\$69.75
12/01/2022	\$44.08	\$9.10	\$17.57	\$0.00	\$70.75
06/01/2023	\$45.08	\$9.10	\$17.57	\$0.00	\$71.75
12/01/2023	\$46.33	\$9.10	\$17.57	\$0.00	\$73.00

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DEMO: CONCRETE CUTTER/SAWYER <i>LABORERS - ZONE 2</i>	12/01/2021	\$42.33	\$9.10	\$17.57	\$0.00	\$69.00
	06/01/2022	\$43.33	\$9.10	\$17.57	\$0.00	\$70.00
	12/01/2022	\$44.33	\$9.10	\$17.57	\$0.00	\$71.00
	06/01/2023	\$45.33	\$9.10	\$17.57	\$0.00	\$72.00
	12/01/2023	\$46.58	\$9.10	\$17.57	\$0.00	\$73.25
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2021	\$42.08	\$9.10	\$17.57	\$0.00	\$68.75
	06/01/2022	\$43.08	\$9.10	\$17.57	\$0.00	\$69.75
	12/01/2022	\$44.08	\$9.10	\$17.57	\$0.00	\$70.75
	06/01/2023	\$45.08	\$9.10	\$17.57	\$0.00	\$71.75
	12/01/2023	\$46.33	\$9.10	\$17.57	\$0.00	\$73.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER <i>LABORERS - ZONE 2</i>	12/01/2021	\$41.33	\$9.10	\$17.57	\$0.00	\$68.00
	06/01/2022	\$42.33	\$9.10	\$17.57	\$0.00	\$69.00
	12/01/2022	\$43.33	\$9.10	\$17.57	\$0.00	\$70.00
	06/01/2023	\$44.33	\$9.10	\$17.57	\$0.00	\$71.00
	12/01/2023	\$45.58	\$9.10	\$17.57	\$0.00	\$72.25
For apprentice rates see "Apprentice- LABORER"						
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$50.83	\$14.00	\$16.05	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$68.70	\$9.40	\$23.12	\$0.00	\$101.22
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$73.60	\$9.40	\$23.12	\$0.00	\$106.12
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
DRAWBRIDGE OPERATOR (Construction) <i>DRAWBRIDGE - SEIU LOCAL 888</i>	07/01/2020	\$26.77	\$6.67	\$3.93	\$0.16	\$37.53
ELECTRICIAN <i>ELECTRICIANS LOCAL 103</i>	03/01/2022	\$57.32	\$13.00	\$20.82	\$0.00	\$91.14
	09/01/2022	\$58.76	\$13.00	\$20.86	\$0.00	\$92.62
	03/01/2023	\$60.43	\$13.00	\$20.91	\$0.00	\$94.34

Classification
Effective Date
Base Wage
Health
Pension
**Supplemental
Unemployment**
Total Rate
Apprentice - ELECTRICIAN - Local 103
Effective Date - 03/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$22.93	\$13.00	\$0.69	\$0.00	\$36.62
2	40	\$22.93	\$13.00	\$0.69	\$0.00	\$36.62
3	45	\$25.79	\$13.00	\$15.62	\$0.00	\$54.41
4	45	\$25.79	\$13.00	\$15.62	\$0.00	\$54.41
5	50	\$28.66	\$13.00	\$16.10	\$0.00	\$57.76
6	55	\$31.53	\$13.00	\$16.58	\$0.00	\$61.11
7	60	\$34.39	\$13.00	\$17.04	\$0.00	\$64.43
8	65	\$37.26	\$13.00	\$17.52	\$0.00	\$67.78
9	70	\$40.12	\$13.00	\$17.98	\$0.00	\$71.10
10	75	\$42.99	\$13.00	\$18.46	\$0.00	\$74.45

Effective Date - 09/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$23.50	\$13.00	\$0.71	\$0.00	\$37.21
2	40	\$23.50	\$13.00	\$0.71	\$0.00	\$37.21
3	45	\$26.44	\$13.00	\$15.64	\$0.00	\$55.08
4	45	\$26.44	\$13.00	\$15.64	\$0.00	\$55.08
5	50	\$29.38	\$13.00	\$16.12	\$0.00	\$58.50
6	55	\$32.32	\$13.00	\$16.60	\$0.00	\$61.92
7	60	\$35.26	\$13.00	\$17.07	\$0.00	\$65.33
8	65	\$38.19	\$13.00	\$17.55	\$0.00	\$68.74
9	70	\$41.13	\$13.00	\$18.01	\$0.00	\$72.14
10	75	\$44.07	\$13.00	\$18.49	\$0.00	\$75.56

Notes: :

App Prior 1/1/03; 30/35/40/45/50/55/65/70/75/80

Apprentice to Journeyworker Ratio:2:3***
ELEVATOR CONSTRUCTOR
ELEVATOR CONSTRUCTORS LOCAL 4

01/01/2022

\$65.62

\$16.03

\$20.21

\$0.00

\$101.86

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - ELEVATOR CONSTRUCTOR - Local 4						
Effective Date - 01/01/2022						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$32.81	\$16.03	\$0.00	\$0.00	\$48.84
2	55	\$36.09	\$16.03	\$20.21	\$0.00	\$72.33
3	65	\$42.65	\$16.03	\$20.21	\$0.00	\$78.89
4	70	\$45.93	\$16.03	\$20.21	\$0.00	\$82.17
5	80	\$52.50	\$16.03	\$20.21	\$0.00	\$88.74
Notes: Steps 1-2 are 6 mos.; Steps 3-5 are 1 year						
Apprentice to Journeyworker Ratio:1:1						
ELEVATOR CONSTRUCTOR HELPER <i>ELEVATOR CONSTRUCTORS LOCAL 4</i>	01/01/2022	\$45.93	\$16.03	\$20.21	\$0.00	\$82.17
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"						
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2021	\$46.53	\$13.75	\$15.80	\$0.00	\$76.08
	05/01/2022	\$47.86	\$13.75	\$15.80	\$0.00	\$77.41
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2021	\$48.06	\$13.75	\$15.80	\$0.00	\$77.61
	05/01/2022	\$49.22	\$13.75	\$15.80	\$0.00	\$78.77
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2021	\$23.16	\$13.75	\$15.80	\$0.00	\$52.71
	05/01/2022	\$23.83	\$13.75	\$15.80	\$0.00	\$53.38
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	03/01/2022	\$57.32	\$13.00	\$20.82	\$0.00	\$91.14
	09/01/2022	\$58.76	\$13.00	\$20.86	\$0.00	\$92.62
	03/01/2023	\$60.43	\$13.00	\$20.91	\$0.00	\$94.34
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE <i>/ COMMISSIONINGELECTRICIANS LOCAL 103</i>	03/01/2022	\$44.71	\$13.00	\$18.74	\$0.00	\$76.45
	09/01/2022	\$46.42	\$13.00	\$18.87	\$0.00	\$78.29
	03/01/2023	\$48.34	\$13.00	\$19.01	\$0.00	\$80.35
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$41.76	\$14.00	\$16.05	\$0.00	\$71.81
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2021	\$24.50	\$9.10	\$16.64	\$0.00	\$50.24
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE 1</i>	03/01/2022	\$49.93	\$8.68	\$20.27	\$0.00	\$78.88

Apprentice - FLOORCOVERER - Local 2168 Zone I

Effective Date - 03/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.97	\$8.68	\$1.79	\$0.00	\$35.44
2	55	\$27.46	\$8.68	\$1.79	\$0.00	\$37.93
3	60	\$29.96	\$8.68	\$14.90	\$0.00	\$53.54
4	65	\$32.45	\$8.68	\$14.90	\$0.00	\$56.03
5	70	\$34.95	\$8.68	\$16.69	\$0.00	\$60.32
6	75	\$37.45	\$8.68	\$16.69	\$0.00	\$62.82
7	80	\$39.94	\$8.68	\$18.48	\$0.00	\$67.10
8	85	\$42.44	\$8.68	\$18.48	\$0.00	\$69.60

Notes: Steps are 750 hrs.

% After 10/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)

Step 1&2 \$32.94/ 3&4 \$39.66/ 5&6 \$60.32/ 7&8 \$67.10

Apprentice to Journeyworker Ratio:1:1

FORK LIFT/CHERRY PICKER OPERATING ENGINEERS LOCAL 4	12/01/2021	\$51.38	\$14.00	\$16.05	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GENERATOR/LIGHTING PLANT/HEATERS OPERATING ENGINEERS LOCAL 4	12/01/2021	\$33.69	\$14.00	\$16.05	\$0.00	\$63.74
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) GLAZIERS LOCAL 35 (ZONE 2)	01/01/2022	\$43.16	\$8.65	\$23.05	\$0.00	\$74.86
	07/01/2022	\$44.36	\$8.65	\$23.05	\$0.00	\$76.06
	01/01/2023	\$45.56	\$8.65	\$23.05	\$0.00	\$77.26
	07/01/2023	\$46.76	\$8.65	\$23.05	\$0.00	\$78.46
	01/01/2024	\$47.96	\$8.65	\$23.05	\$0.00	\$79.66
	07/01/2024	\$49.16	\$8.65	\$23.05	\$0.00	\$80.86
	01/01/2025	\$50.36	\$8.65	\$23.05	\$0.00	\$82.06

Classification

**Effective Date Base Wage Health Pension Supplemental
Unemployment Total Rate**

Apprentice - GLAZIER - Local 35 Zone 2

Effective Date - 01/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.58	\$8.65	\$0.00	\$0.00	\$30.23
2	55	\$23.74	\$8.65	\$6.27	\$0.00	\$38.66
3	60	\$25.90	\$8.65	\$6.84	\$0.00	\$41.39
4	65	\$28.05	\$8.65	\$7.41	\$0.00	\$44.11
5	70	\$30.21	\$8.65	\$19.63	\$0.00	\$58.49
6	75	\$32.37	\$8.65	\$20.20	\$0.00	\$61.22
7	80	\$34.53	\$8.65	\$20.77	\$0.00	\$63.95
8	90	\$38.84	\$8.65	\$21.91	\$0.00	\$69.40

Effective Date - 07/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.18	\$8.65	\$0.00	\$0.00	\$30.83
2	55	\$24.40	\$8.65	\$6.27	\$0.00	\$39.32
3	60	\$26.62	\$8.65	\$6.84	\$0.00	\$42.11
4	65	\$28.83	\$8.65	\$7.41	\$0.00	\$44.89
5	70	\$31.05	\$8.65	\$19.63	\$0.00	\$59.33
6	75	\$33.27	\$8.65	\$20.20	\$0.00	\$62.12
7	80	\$35.49	\$8.65	\$20.77	\$0.00	\$64.91
8	90	\$39.92	\$8.65	\$21.91	\$0.00	\$70.48

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

HOISTING ENGINEER/CRANES/GRADALLS OPERATING ENGINEERS LOCAL 4	12/01/2021	\$51.38	\$14.00	\$16.05	\$0.00	\$81.43
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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - OPERATING ENGINEERS - Local 4						
Effective Date - 12/01/2021						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$28.26	\$14.00	\$0.00	\$0.00	\$42.26
2	60	\$30.83	\$14.00	\$16.05	\$0.00	\$60.88
3	65	\$33.40	\$14.00	\$16.05	\$0.00	\$63.45
4	70	\$35.97	\$14.00	\$16.05	\$0.00	\$66.02
5	75	\$38.54	\$14.00	\$16.05	\$0.00	\$68.59
6	80	\$41.10	\$14.00	\$16.05	\$0.00	\$71.15
7	85	\$43.67	\$14.00	\$16.05	\$0.00	\$73.72
8	90	\$46.24	\$14.00	\$16.05	\$0.00	\$76.29
Notes:						
Apprentice to Journeyworker Ratio:1:6						
HVAC (DUCTWORK) <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	02/01/2022	\$53.70	\$13.80	\$25.60	\$2.79	\$95.89
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (ELECTRICAL CONTROLS) <i>ELECTRICIANS LOCAL 103</i>	03/01/2022	\$57.32	\$13.00	\$20.82	\$0.00	\$91.14
	09/01/2022	\$58.76	\$13.00	\$20.86	\$0.00	\$92.62
	03/01/2023	\$60.43	\$13.00	\$20.91	\$0.00	\$94.34
For apprentice rates see "Apprentice- ELECTRICIAN"						
HVAC (TESTING AND BALANCING - AIR) <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	02/01/2022	\$53.70	\$13.80	\$25.60	\$2.79	\$95.89
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (TESTING AND BALANCING -WATER) <i>PIPEFITTERS LOCAL 537</i>	03/01/2021	\$57.94	\$11.70	\$20.24	\$0.00	\$89.88
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC <i>PIPEFITTERS LOCAL 537</i>	03/01/2021	\$57.94	\$11.70	\$20.24	\$0.00	\$89.88
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS <i>LABORERS - ZONE 2</i>	12/01/2021	\$36.16	\$9.10	\$16.64	\$0.00	\$61.90
	06/01/2022	\$37.06	\$9.10	\$16.64	\$0.00	\$62.80
	12/01/2022	\$37.91	\$9.10	\$16.64	\$0.00	\$63.65
	06/01/2023	\$38.81	\$9.10	\$16.64	\$0.00	\$64.55
	12/01/2023	\$39.71	\$9.10	\$16.64	\$0.00	\$65.45
For apprentice rates see "Apprentice- LABORER"						
HYDRAULIC DRILLS (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2021	\$36.16	\$9.10	\$16.64	\$0.00	\$61.90
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
INSULATOR (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	09/01/2021	\$51.40	\$13.80	\$17.14	\$0.00	\$82.34
	09/01/2022	\$53.85	\$13.80	\$17.14	\$0.00	\$84.79

Apprentice - ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Boston**Effective Date - 09/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.70	\$13.80	\$12.42	\$0.00	\$51.92
2	60	\$30.84	\$13.80	\$13.36	\$0.00	\$58.00
3	70	\$35.98	\$13.80	\$14.31	\$0.00	\$64.09
4	80	\$41.12	\$13.80	\$15.25	\$0.00	\$70.17

Effective Date - 09/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.93	\$13.80	\$12.42	\$0.00	\$53.15
2	60	\$32.31	\$13.80	\$13.36	\$0.00	\$59.47
3	70	\$37.70	\$13.80	\$14.31	\$0.00	\$65.81
4	80	\$43.08	\$13.80	\$15.25	\$0.00	\$72.13

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4**IRONWORKER/WELDER***IRONWORKERS LOCAL 7 (WORCESTER AREA)*

09/16/2021

\$49.83

\$8.15

\$25.80

\$0.00

\$83.78

03/16/2022

\$50.30

\$8.20

\$26.50

\$0.00

\$85.00

Apprentice - IRONWORKER - Local 7 Worcester**Effective Date - 09/16/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$29.90	\$8.15	\$25.80	\$0.00	\$63.85
2	70	\$34.88	\$8.15	\$25.80	\$0.00	\$68.83
3	75	\$37.37	\$8.15	\$25.80	\$0.00	\$71.32
4	80	\$39.86	\$8.15	\$25.80	\$0.00	\$73.81
5	85	\$42.36	\$8.15	\$25.80	\$0.00	\$76.31
6	90	\$44.85	\$8.15	\$25.80	\$0.00	\$78.80

Effective Date - 03/16/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$30.18	\$8.20	\$26.50	\$0.00	\$64.88
2	70	\$35.21	\$8.20	\$26.50	\$0.00	\$69.91
3	75	\$37.73	\$8.20	\$26.50	\$0.00	\$72.43
4	80	\$40.24	\$8.20	\$26.50	\$0.00	\$74.94
5	85	\$42.76	\$8.20	\$26.50	\$0.00	\$77.46
6	90	\$45.27	\$8.20	\$26.50	\$0.00	\$79.97

Notes:

Structural 1:6; Ornamental 1:4

Apprentice to Journeyworker Ratio:

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
JACKHAMMER & PAVING BREAKER OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
	06/01/2022	\$36.56	\$9.10	\$16.64	\$0.00	\$62.30
	12/01/2022	\$37.41	\$9.10	\$16.64	\$0.00	\$63.15
	06/01/2023	\$38.31	\$9.10	\$16.64	\$0.00	\$64.05
	12/01/2023	\$39.21	\$9.10	\$16.64	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						

LABORER <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.41	\$9.10	\$16.64	\$0.00	\$61.15
	06/01/2022	\$36.31	\$9.10	\$16.64	\$0.00	\$62.05
	12/01/2022	\$37.16	\$9.10	\$16.64	\$0.00	\$62.90
	06/01/2023	\$38.06	\$9.10	\$16.64	\$0.00	\$63.80
	12/01/2023	\$38.96	\$9.10	\$16.64	\$0.00	\$64.70

Apprentice - LABORER - Zone 2

Effective Date - 12/01/2021

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.25	\$9.10	\$16.64	\$0.00	\$46.99
2	70	\$24.79	\$9.10	\$16.64	\$0.00	\$50.53
3	80	\$28.33	\$9.10	\$16.64	\$0.00	\$54.07
4	90	\$31.87	\$9.10	\$16.64	\$0.00	\$57.61

Effective Date - 06/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.79	\$9.10	\$16.64	\$0.00	\$47.53
2	70	\$25.42	\$9.10	\$16.64	\$0.00	\$51.16
3	80	\$29.05	\$9.10	\$16.64	\$0.00	\$54.79
4	90	\$32.68	\$9.10	\$16.64	\$0.00	\$58.42

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2021	\$35.41	\$9.10	\$16.64	\$0.00	\$61.15
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Apprentice - LABORER (Heavy & Highway) - Zone 2

Effective Date - 12/01/2021

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.25	\$9.10	\$16.64	\$0.00	\$46.99
2	70	\$24.79	\$9.10	\$16.64	\$0.00	\$50.53
3	80	\$28.33	\$9.10	\$16.64	\$0.00	\$54.07
4	90	\$31.87	\$9.10	\$16.64	\$0.00	\$57.61

Notes:

Apprentice to Journeyworker Ratio:1:5

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: CARPENTER TENDER <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.41	\$9.10	\$16.64	\$0.00	\$61.15
	06/01/2022	\$36.31	\$9.10	\$16.64	\$0.00	\$62.05
	12/01/2022	\$37.16	\$9.10	\$16.64	\$0.00	\$62.90
	06/01/2023	\$38.06	\$9.10	\$16.64	\$0.00	\$63.80
	12/01/2023	\$38.96	\$9.10	\$16.64	\$0.00	\$64.70
For apprentice rates see "Apprentice- LABORER"						
LABORER: CEMENT FINISHER TENDER <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.41	\$9.10	\$16.64	\$0.00	\$61.15
	06/01/2022	\$36.31	\$9.10	\$16.64	\$0.00	\$62.05
	12/01/2022	\$37.16	\$9.10	\$16.64	\$0.00	\$62.90
	06/01/2023	\$38.06	\$9.10	\$16.64	\$0.00	\$63.80
	12/01/2023	\$38.96	\$9.10	\$16.64	\$0.00	\$64.70
For apprentice rates see "Apprentice- LABORER"						
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.50	\$9.10	\$16.70	\$0.00	\$61.30
	06/01/2022	\$36.40	\$9.10	\$16.70	\$0.00	\$62.20
	12/01/2022	\$37.25	\$9.10	\$16.70	\$0.00	\$63.05
	06/01/2023	\$38.15	\$9.10	\$16.70	\$0.00	\$63.95
	12/01/2023	\$39.05	\$9.10	\$16.70	\$0.00	\$64.85
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
	06/01/2022	\$36.56	\$9.10	\$16.64	\$0.00	\$62.30
	12/01/2022	\$37.41	\$9.10	\$16.64	\$0.00	\$63.15
	06/01/2023	\$38.31	\$9.10	\$16.64	\$0.00	\$64.05
	12/01/2023	\$39.21	\$9.10	\$16.64	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.41	\$9.10	\$16.64	\$0.00	\$61.15
	06/01/2022	\$36.31	\$9.10	\$16.64	\$0.00	\$62.05
	12/01/2022	\$37.16	\$9.10	\$16.64	\$0.00	\$62.90
	06/01/2023	\$38.06	\$9.10	\$16.64	\$0.00	\$63.80
	12/01/2023	\$38.96	\$9.10	\$16.64	\$0.00	\$64.70
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.41	\$9.10	\$16.64	\$0.00	\$61.15
	06/01/2022	\$36.31	\$9.10	\$16.64	\$0.00	\$62.05
	12/01/2022	\$37.16	\$9.10	\$16.64	\$0.00	\$62.90
	06/01/2023	\$38.06	\$9.10	\$16.64	\$0.00	\$63.80
	12/01/2023	\$38.96	\$9.10	\$16.64	\$0.00	\$64.70
This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
	06/01/2022	\$36.56	\$9.10	\$16.64	\$0.00	\$62.30
	12/01/2022	\$37.41	\$9.10	\$16.64	\$0.00	\$63.15
	06/01/2023	\$38.31	\$9.10	\$16.64	\$0.00	\$64.05
	12/01/2023	\$39.21	\$9.10	\$16.64	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate																																										
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)																																																
MARBLE & TILE FINISHERS BRICKLAYERS LOCAL 3 - MARBLE & TILE	02/01/2022	\$43.69	\$11.39	\$20.37	\$0.00	\$75.45																																										
Apprentice - MARBLE & TILE FINISHER - Local 3 Marble & Tile Effective Date - 02/01/2022 <table> <tr> <th>Step</th><th>percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr> <tr> <td>1</td><td>50</td><td>\$21.85</td><td>\$11.39</td><td>\$20.37</td><td>\$0.00</td><td>\$53.61</td></tr> <tr> <td>2</td><td>60</td><td>\$26.21</td><td>\$11.39</td><td>\$20.37</td><td>\$0.00</td><td>\$57.97</td></tr> <tr> <td>3</td><td>70</td><td>\$30.58</td><td>\$11.39</td><td>\$20.37</td><td>\$0.00</td><td>\$62.34</td></tr> <tr> <td>4</td><td>80</td><td>\$34.95</td><td>\$11.39</td><td>\$20.37</td><td>\$0.00</td><td>\$66.71</td></tr> <tr> <td>5</td><td>90</td><td>\$39.32</td><td>\$11.39</td><td>\$20.37</td><td>\$0.00</td><td>\$71.08</td></tr> </table> <div>Notes:</div> Apprentice to Journeyworker Ratio:1:3							Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	1	50	\$21.85	\$11.39	\$20.37	\$0.00	\$53.61	2	60	\$26.21	\$11.39	\$20.37	\$0.00	\$57.97	3	70	\$30.58	\$11.39	\$20.37	\$0.00	\$62.34	4	80	\$34.95	\$11.39	\$20.37	\$0.00	\$66.71	5	90	\$39.32	\$11.39	\$20.37	\$0.00	\$71.08
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate																																										
1	50	\$21.85	\$11.39	\$20.37	\$0.00	\$53.61																																										
2	60	\$26.21	\$11.39	\$20.37	\$0.00	\$57.97																																										
3	70	\$30.58	\$11.39	\$20.37	\$0.00	\$62.34																																										
4	80	\$34.95	\$11.39	\$20.37	\$0.00	\$66.71																																										
5	90	\$39.32	\$11.39	\$20.37	\$0.00	\$71.08																																										
MARBLE MASONS,TILELAYERS & TERRAZZO MECH BRICKLAYERS LOCAL 3 - MARBLE & TILE	02/01/2022	\$57.17	\$11.39	\$22.31	\$0.00	\$90.87																																										
Apprentice - MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile Effective Date - 02/01/2022 <table> <tr> <th>Step</th><th>percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr> <tr> <td>1</td><td>50</td><td>\$28.59</td><td>\$11.39</td><td>\$22.31</td><td>\$0.00</td><td>\$62.29</td></tr> <tr> <td>2</td><td>60</td><td>\$34.30</td><td>\$11.39</td><td>\$22.31</td><td>\$0.00</td><td>\$68.00</td></tr> <tr> <td>3</td><td>70</td><td>\$40.02</td><td>\$11.39</td><td>\$22.31</td><td>\$0.00</td><td>\$73.72</td></tr> <tr> <td>4</td><td>80</td><td>\$45.74</td><td>\$11.39</td><td>\$22.31</td><td>\$0.00</td><td>\$79.44</td></tr> <tr> <td>5</td><td>90</td><td>\$51.45</td><td>\$11.39</td><td>\$22.31</td><td>\$0.00</td><td>\$85.15</td></tr> </table> <div>Notes:</div> Apprentice to Journeyworker Ratio:1:5							Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	1	50	\$28.59	\$11.39	\$22.31	\$0.00	\$62.29	2	60	\$34.30	\$11.39	\$22.31	\$0.00	\$68.00	3	70	\$40.02	\$11.39	\$22.31	\$0.00	\$73.72	4	80	\$45.74	\$11.39	\$22.31	\$0.00	\$79.44	5	90	\$51.45	\$11.39	\$22.31	\$0.00	\$85.15
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate																																										
1	50	\$28.59	\$11.39	\$22.31	\$0.00	\$62.29																																										
2	60	\$34.30	\$11.39	\$22.31	\$0.00	\$68.00																																										
3	70	\$40.02	\$11.39	\$22.31	\$0.00	\$73.72																																										
4	80	\$45.74	\$11.39	\$22.31	\$0.00	\$79.44																																										
5	90	\$51.45	\$11.39	\$22.31	\$0.00	\$85.15																																										
MECH. SWEEPER OPERATOR (ON CONST. SITES) OPERATING ENGINEERS LOCAL 4	12/01/2021	\$50.83	\$14.00	\$16.05	\$0.00	\$80.88																																										
For apprentice rates see "Apprentice- OPERATING ENGINEERS"																																																
MECHANICS MAINTENANCE OPERATING ENGINEERS LOCAL 4	12/01/2021	\$50.83	\$14.00	\$16.05	\$0.00	\$80.88																																										
For apprentice rates see "Apprentice- OPERATING ENGINEERS"																																																
MILLWRIGHT (Zone 2) MILLWRIGHTS LOCAL 1121 - Zone 2	01/03/2022	\$40.67	\$8.58	\$21.57	\$0.00	\$70.82																																										
	01/02/2023	\$41.92	\$8.58	\$21.57	\$0.00	\$72.07																																										

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - MILLWRIGHT - Local 1121 Zone 2						
Effective Date - 01/03/2022						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$22.37	\$8.58	\$5.72	\$0.00	\$36.67
2	65	\$26.44	\$8.58	\$17.93	\$0.00	\$52.95
3	75	\$30.50	\$8.58	\$18.98	\$0.00	\$58.06
4	85	\$34.57	\$8.58	\$20.01	\$0.00	\$63.16
Effective Date - 01/02/2023						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$23.06	\$8.58	\$5.72	\$0.00	\$37.36
2	65	\$27.25	\$8.58	\$17.93	\$0.00	\$53.76
3	75	\$31.44	\$8.58	\$18.98	\$0.00	\$59.00
4	85	\$35.63	\$8.58	\$20.01	\$0.00	\$64.22
<div>Notes: Step 1&2 Appr. indentured after 1/6/2020 receive no pension, but do receive annuity. (Step 1 \$5.72, Step 2 \$6.66) Steps are 2,000 hours</div>						
Apprentice to Journeyworker Ratio:1:4						
MORTAR MIXER	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
LABORERS - ZONE 2	06/01/2022	\$36.56	\$9.10	\$16.64	\$0.00	\$62.30
	12/01/2022	\$37.41	\$9.10	\$16.64	\$0.00	\$63.15
	06/01/2023	\$38.31	\$9.10	\$16.64	\$0.00	\$64.05
	12/01/2023	\$39.21	\$9.10	\$16.64	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
OILER (OTHER THAN TRUCK CRANES,GRADALLS)	12/01/2021	\$23.48	\$14.00	\$16.05	\$0.00	\$53.53
OPERATING ENGINEERS LOCAL 4						
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
OILER (TRUCK CRANES, GRADALLS)	12/01/2021	\$28.44	\$14.00	\$16.05	\$0.00	\$58.49
OPERATING ENGINEERS LOCAL 4						
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
OTHER POWER DRIVEN EQUIPMENT - CLASS II	12/01/2021	\$50.83	\$14.00	\$16.05	\$0.00	\$80.88
OPERATING ENGINEERS LOCAL 4						
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PAINTER (BRIDGES/TANKS)	01/01/2022	\$53.66	\$8.65	\$23.05	\$0.00	\$85.36
PAINTERS LOCAL 35 - ZONE 2	07/01/2022	\$54.86	\$8.65	\$23.05	\$0.00	\$86.56
	01/01/2023	\$56.06	\$8.65	\$23.05	\$0.00	\$87.76
	07/01/2023	\$57.26	\$8.65	\$23.05	\$0.00	\$88.96
	01/01/2024	\$58.46	\$8.65	\$23.05	\$0.00	\$90.16
	07/01/2024	\$59.66	\$8.65	\$23.05	\$0.00	\$91.36
	01/01/2025	\$60.86	\$8.65	\$23.05	\$0.00	\$92.56

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.83	\$8.65	\$0.00	\$0.00	\$35.48
2	55	\$29.51	\$8.65	\$6.27	\$0.00	\$44.43
3	60	\$32.20	\$8.65	\$6.84	\$0.00	\$47.69
4	65	\$34.88	\$8.65	\$7.41	\$0.00	\$50.94
5	70	\$37.56	\$8.65	\$19.63	\$0.00	\$65.84
6	75	\$40.25	\$8.65	\$20.20	\$0.00	\$69.10
7	80	\$42.93	\$8.65	\$20.77	\$0.00	\$72.35
8	90	\$48.29	\$8.65	\$21.91	\$0.00	\$78.85

Effective Date - 07/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.43	\$8.65	\$0.00	\$0.00	\$36.08
2	55	\$30.17	\$8.65	\$6.27	\$0.00	\$45.09
3	60	\$32.92	\$8.65	\$6.84	\$0.00	\$48.41
4	65	\$35.66	\$8.65	\$7.41	\$0.00	\$51.72
5	70	\$38.40	\$8.65	\$19.63	\$0.00	\$66.68
6	75	\$41.15	\$8.65	\$20.20	\$0.00	\$70.00
7	80	\$43.89	\$8.65	\$20.77	\$0.00	\$73.31
8	90	\$49.37	\$8.65	\$21.91	\$0.00	\$79.93

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2022	\$44.56	\$8.65	\$23.05	\$0.00	\$76.26
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. <i>PAINTERS LOCAL 35 - ZONE 2</i>	07/01/2022	\$45.76	\$8.65	\$23.05	\$0.00	\$77.46
	01/01/2023	\$46.96	\$8.65	\$23.05	\$0.00	\$78.66
	07/01/2023	\$48.16	\$8.65	\$23.05	\$0.00	\$79.86
	01/01/2024	\$49.36	\$8.65	\$23.05	\$0.00	\$81.06
	07/01/2024	\$50.56	\$8.65	\$23.05	\$0.00	\$82.26
	01/01/2025	\$51.76	\$8.65	\$23.05	\$0.00	\$83.46

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - New

Effective Date - 01/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.28	\$8.65	\$0.00	\$0.00	\$30.93
2	55	\$24.51	\$8.65	\$6.27	\$0.00	\$39.43
3	60	\$26.74	\$8.65	\$6.84	\$0.00	\$42.23
4	65	\$28.96	\$8.65	\$7.41	\$0.00	\$45.02
5	70	\$31.19	\$8.65	\$19.63	\$0.00	\$59.47
6	75	\$33.42	\$8.65	\$20.20	\$0.00	\$62.27
7	80	\$35.65	\$8.65	\$20.77	\$0.00	\$65.07
8	90	\$40.10	\$8.65	\$21.91	\$0.00	\$70.66

Effective Date - 07/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.88	\$8.65	\$0.00	\$0.00	\$31.53
2	55	\$25.17	\$8.65	\$6.27	\$0.00	\$40.09
3	60	\$27.46	\$8.65	\$6.84	\$0.00	\$42.95
4	65	\$29.74	\$8.65	\$7.41	\$0.00	\$45.80
5	70	\$32.03	\$8.65	\$19.63	\$0.00	\$60.31
6	75	\$34.32	\$8.65	\$20.20	\$0.00	\$63.17
7	80	\$36.61	\$8.65	\$20.77	\$0.00	\$66.03
8	90	\$41.18	\$8.65	\$21.91	\$0.00	\$71.74

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	01/01/2022	\$42.62	\$8.65	\$23.05	\$0.00	\$74.32
PAINTERS LOCAL 35 - ZONE 2	07/01/2022	\$43.82	\$8.65	\$23.05	\$0.00	\$75.52
	01/01/2023	\$45.02	\$8.65	\$23.05	\$0.00	\$76.72
	07/01/2023	\$46.22	\$8.65	\$23.05	\$0.00	\$77.92
	01/01/2024	\$47.42	\$8.65	\$23.05	\$0.00	\$79.12
	07/01/2024	\$48.62	\$8.65	\$23.05	\$0.00	\$80.32
	01/01/2025	\$49.82	\$8.65	\$23.05	\$0.00	\$81.52

Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - Repaint**Effective Date - 01/01/2022**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.31	\$8.65	\$0.00	\$0.00	\$29.96
2	55	\$23.44	\$8.65	\$6.27	\$0.00	\$38.36
3	60	\$25.57	\$8.65	\$6.84	\$0.00	\$41.06
4	65	\$27.70	\$8.65	\$7.41	\$0.00	\$43.76
5	70	\$29.83	\$8.65	\$19.63	\$0.00	\$58.11
6	75	\$31.97	\$8.65	\$20.20	\$0.00	\$60.82
7	80	\$34.10	\$8.65	\$20.77	\$0.00	\$63.52
8	90	\$38.36	\$8.65	\$21.91	\$0.00	\$68.92

Effective Date - 07/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.91	\$8.65	\$0.00	\$0.00	\$30.56
2	55	\$24.10	\$8.65	\$6.27	\$0.00	\$39.02
3	60	\$26.29	\$8.65	\$6.84	\$0.00	\$41.78
4	65	\$28.48	\$8.65	\$7.41	\$0.00	\$44.54
5	70	\$30.67	\$8.65	\$19.63	\$0.00	\$58.95
6	75	\$32.87	\$8.65	\$20.20	\$0.00	\$61.72
7	80	\$35.06	\$8.65	\$20.77	\$0.00	\$64.48
8	90	\$39.44	\$8.65	\$21.91	\$0.00	\$70.00

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, NEW) *

* If 30% or more of surfaces to be painted are new construction,
NEW paint rate shall be used. *PAINTERS LOCAL 35 - ZONE 2*

01/01/2022	\$43.16	\$8.65	\$23.05	\$0.00	\$74.86
07/01/2022	\$44.36	\$8.65	\$23.05	\$0.00	\$76.06
01/01/2023	\$45.56	\$8.65	\$23.05	\$0.00	\$77.26
07/01/2023	\$46.76	\$8.65	\$23.05	\$0.00	\$78.46
01/01/2024	\$47.96	\$8.65	\$23.05	\$0.00	\$79.66
07/01/2024	\$49.16	\$8.65	\$23.05	\$0.00	\$80.86
01/01/2025	\$50.36	\$8.65	\$23.05	\$0.00	\$82.06

Apprentice - PAINTER - Local 35 Zone 2 - BRUSH NEW**Effective Date - 01/01/2022**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.58	\$8.65	\$0.00	\$0.00	\$30.23
2	55	\$23.74	\$8.65	\$6.27	\$0.00	\$38.66
3	60	\$25.90	\$8.65	\$6.84	\$0.00	\$41.39
4	65	\$28.05	\$8.65	\$7.41	\$0.00	\$44.11
5	70	\$30.21	\$8.65	\$19.63	\$0.00	\$58.49
6	75	\$32.37	\$8.65	\$20.20	\$0.00	\$61.22
7	80	\$34.53	\$8.65	\$20.77	\$0.00	\$63.95
8	90	\$38.84	\$8.65	\$21.91	\$0.00	\$69.40

Effective Date - 07/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.18	\$8.65	\$0.00	\$0.00	\$30.83
2	55	\$24.40	\$8.65	\$6.27	\$0.00	\$39.32
3	60	\$26.62	\$8.65	\$6.84	\$0.00	\$42.11
4	65	\$28.83	\$8.65	\$7.41	\$0.00	\$44.89
5	70	\$31.05	\$8.65	\$19.63	\$0.00	\$59.33
6	75	\$33.27	\$8.65	\$20.20	\$0.00	\$62.12
7	80	\$35.49	\$8.65	\$20.77	\$0.00	\$64.91
8	90	\$39.92	\$8.65	\$21.91	\$0.00	\$70.48

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT)

PAINTERS LOCAL 35 - ZONE 2

01/01/2022	\$41.22	\$8.65	\$23.05	\$0.00	\$72.92
07/01/2022	\$42.42	\$8.65	\$23.05	\$0.00	\$74.12
01/01/2023	\$43.62	\$8.65	\$23.05	\$0.00	\$75.32
07/01/2023	\$44.82	\$8.65	\$23.05	\$0.00	\$76.52
01/01/2024	\$46.02	\$8.65	\$23.05	\$0.00	\$77.72
07/01/2024	\$47.22	\$8.65	\$23.05	\$0.00	\$78.92
01/01/2025	\$48.42	\$8.65	\$23.05	\$0.00	\$80.12

Apprentice - PAINTER Local 35 Zone 2 - BRUSH REPAINT

Effective Date - 01/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.61	\$8.65	\$0.00	\$0.00	\$29.26
2	55	\$22.67	\$8.65	\$6.27	\$0.00	\$37.59
3	60	\$24.73	\$8.65	\$6.84	\$0.00	\$40.22
4	65	\$26.79	\$8.65	\$7.41	\$0.00	\$42.85
5	70	\$28.85	\$8.65	\$19.63	\$0.00	\$57.13
6	75	\$30.92	\$8.65	\$20.20	\$0.00	\$59.77
7	80	\$32.98	\$8.65	\$20.77	\$0.00	\$62.40
8	90	\$37.10	\$8.65	\$21.91	\$0.00	\$67.66

Effective Date - 07/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.21	\$8.65	\$0.00	\$0.00	\$29.86
2	55	\$23.33	\$8.65	\$6.27	\$0.00	\$38.25
3	60	\$25.45	\$8.65	\$6.84	\$0.00	\$40.94
4	65	\$27.57	\$8.65	\$7.41	\$0.00	\$43.63
5	70	\$29.69	\$8.65	\$19.63	\$0.00	\$57.97
6	75	\$31.82	\$8.65	\$20.20	\$0.00	\$60.67
7	80	\$33.94	\$8.65	\$20.77	\$0.00	\$63.36
8	90	\$38.18	\$8.65	\$21.91	\$0.00	\$68.74

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY) LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/01/2021	\$35.41	\$9.10	\$16.64	\$0.00	\$61.15
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
PANEL & PICKUP TRUCKS DRIVER TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	12/01/2021	\$35.78	\$13.41	\$16.01	\$0.00	\$65.20
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59
For apprentice rates see "Apprentice- PILE DRIVER"						
PILE DRIVER PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
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Apprentice - PILE DRIVER - Local 56 Zone 1

Effective Date - 08/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.54	\$9.40	\$23.12	\$0.00	\$57.06
2	60	\$29.44	\$9.40	\$23.12	\$0.00	\$61.96
3	70	\$34.35	\$9.40	\$23.12	\$0.00	\$66.87
4	75	\$36.80	\$9.40	\$23.12	\$0.00	\$69.32
5	80	\$39.26	\$9.40	\$23.12	\$0.00	\$71.78
6	80	\$39.26	\$9.40	\$23.12	\$0.00	\$71.78
7	90	\$44.16	\$9.40	\$23.12	\$0.00	\$76.68
8	90	\$44.16	\$9.40	\$23.12	\$0.00	\$76.68

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 \$34.01/ 3&4 \$41.46/ 5&6 \$62.80/ 7&8 \$69.25

Apprentice to Journeyworker Ratio:1:5

PIPEFITTER & STEAMFITTER	03/01/2021	\$57.94	\$11.70	\$20.24	\$0.00	\$89.88
PIPEFITTERS LOCAL 537						

Apprentice - PIPEFITTER - Local 537

Effective Date - 03/01/2021

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$23.18	\$11.70	\$8.25	\$0.00	\$43.13
2	45	\$26.07	\$11.70	\$20.24	\$0.00	\$58.01
3	60	\$34.76	\$11.70	\$20.24	\$0.00	\$66.70
4	70	\$40.56	\$11.70	\$20.24	\$0.00	\$72.50
5	80	\$46.35	\$11.70	\$20.24	\$0.00	\$78.29

Notes:

** 1:3; 3:15; 1:10 thereafter / Steps are 1 yr.
Refrig/AC Mechanic **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8:17;9:20;10:23(Max)

Apprentice to Journeyworker Ratio:**

PIPELAYER	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
LABORERS - ZONE 2						
	06/01/2022	\$36.56	\$9.10	\$16.64	\$0.00	\$62.30
	12/01/2022	\$37.41	\$9.10	\$16.64	\$0.00	\$63.15
	06/01/2023	\$38.31	\$9.10	\$16.64	\$0.00	\$64.05
	12/01/2023	\$39.21	\$9.10	\$16.64	\$0.00	\$64.95

For apprentice rates see "Apprentice- LABORER"

PIPELAYER (HEAVY & HIGHWAY)	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
LABORERS - ZONE 2 (HEAVY & HIGHWAY)						

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PLUMBERS & GASFITTERS	03/01/2022	\$61.79	\$14.07	\$18.36	\$0.00	\$94.22
<i>PLUMBERS & GASFITTERS LOCAL 12</i>	09/04/2022	\$63.49	\$14.07	\$18.36	\$0.00	\$95.92
	02/26/2023	\$65.19	\$14.07	\$18.36	\$0.00	\$97.62
	09/03/2023	\$66.94	\$14.07	\$18.36	\$0.00	\$99.37
	03/03/2024	\$68.74	\$14.07	\$18.36	\$0.00	\$101.17
	09/01/2024	\$70.54	\$14.07	\$18.36	\$0.00	\$102.97
	03/02/2025	\$72.34	\$14.07	\$18.36	\$0.00	\$104.77

Apprentice - PLUMBER/GASFITTER - Local 12

Effective Date - 03/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$21.63	\$14.07	\$6.63	\$0.00	\$42.33
2	40	\$24.72	\$14.07	\$7.52	\$0.00	\$46.31
3	55	\$33.98	\$14.07	\$10.24	\$0.00	\$58.29
4	65	\$40.16	\$14.07	\$12.04	\$0.00	\$66.27
5	75	\$46.34	\$14.07	\$13.85	\$0.00	\$74.26

Effective Date - 09/04/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$22.22	\$14.07	\$6.63	\$0.00	\$42.92
2	40	\$25.40	\$14.07	\$7.52	\$0.00	\$46.99
3	55	\$34.92	\$14.07	\$10.24	\$0.00	\$59.23
4	65	\$41.27	\$14.07	\$12.04	\$0.00	\$67.38
5	75	\$47.62	\$14.07	\$13.85	\$0.00	\$75.54

Notes:

** 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr
Step4 with lic\$69.00, Step5 with lic\$76.87

Apprentice to Journeyworker Ratio:**

PNEUMATIC CONTROLS (TEMP.)	03/01/2021	\$57.94	\$11.70	\$20.24	\$0.00	\$89.88
<i>PIPEFITTERS LOCAL 537</i>						

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

PNEUMATIC DRILL/TOOL OPERATOR	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
<i>LABORERS - ZONE 2</i>	06/01/2022	\$36.56	\$9.10	\$16.64	\$0.00	\$62.30
	12/01/2022	\$37.41	\$9.10	\$16.64	\$0.00	\$63.15
	06/01/2023	\$38.31	\$9.10	\$16.64	\$0.00	\$64.05
	12/01/2023	\$39.21	\$9.10	\$16.64	\$0.00	\$64.95

For apprentice rates see "Apprentice- LABORER"

PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY)	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
<i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>						

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

POWDERMAN & BLASTER	12/01/2021	\$36.41	\$9.10	\$16.64	\$0.00	\$62.15
<i>LABORERS - ZONE 2</i>	06/01/2022	\$37.31	\$9.10	\$16.64	\$0.00	\$63.05
	12/01/2022	\$38.16	\$9.10	\$16.64	\$0.00	\$63.90
	06/01/2023	\$39.06	\$9.10	\$16.64	\$0.00	\$64.80
	12/01/2023	\$39.96	\$9.10	\$16.64	\$0.00	\$65.70

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"						
POWDERMAN & BLASTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2021	\$36.41	\$9.10	\$16.64	\$0.00	\$62.15
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$51.38	\$14.00	\$16.05	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$51.38	\$14.00	\$16.05	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$33.69	\$14.00	\$16.05	\$0.00	\$63.74
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS 170 - J.G. MacLellan (Lowell)</i>	01/01/2022	\$25.50	\$10.37	\$6.35	\$0.00	\$42.22
	05/01/2022	\$25.85	\$10.37	\$6.35	\$0.00	\$42.57
	01/01/2023	\$25.85	\$10.77	\$6.35	\$0.00	\$42.97
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$50.83	\$14.00	\$16.05	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
	06/01/2022	\$36.56	\$9.10	\$16.64	\$0.00	\$62.30
	12/01/2022	\$37.41	\$9.10	\$16.64	\$0.00	\$63.15
	06/01/2023	\$38.31	\$9.10	\$16.64	\$0.00	\$64.05
	12/01/2023	\$39.21	\$9.10	\$16.64	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$50.83	\$14.00	\$16.05	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
ROOFER (Inc.Roofing Waterproofing &Roofing Damproofg) <i>ROOFERS LOCAL 33</i>	02/01/2022	\$47.03	\$12.28	\$19.45	\$0.00	\$78.76

Apprentice - ROOFER - Local 33

Effective Date - 02/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.52	\$12.28	\$5.21	\$0.00	\$41.01
2	60	\$28.22	\$12.28	\$19.45	\$0.00	\$59.95
3	65	\$30.57	\$12.28	\$19.45	\$0.00	\$62.30
4	75	\$35.27	\$12.28	\$19.45	\$0.00	\$67.00
5	85	\$39.98	\$12.28	\$19.45	\$0.00	\$71.71

Notes: ** 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1
Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.
(Hot Pitch Mechanics' receive \$1.00 hr. above ROOFER)

Apprentice to Journeyworker Ratio:**

ROOFER SLATE / TILE / PRECAST CONCRETE <i>ROOFERS LOCAL 33</i>	02/01/2022	\$47.28	\$12.28	\$19.45	\$0.00	\$79.01
For apprentice rates see "Apprentice- ROOFER"						
SHEETMETAL WORKER <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	02/01/2022	\$53.70	\$13.80	\$25.60	\$2.79	\$95.89

Classification
Effective Date
Base Wage
Health
Pension
**Supplemental
Unemployment**
Total Rate
Apprentice - SHEET METAL WORKER - Local 17-A
Effective Date - 02/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	42	\$22.55	\$13.80	\$6.01	\$0.00	\$42.36
2	42	\$22.55	\$13.80	\$6.01	\$0.00	\$42.36
3	47	\$25.24	\$13.80	\$11.26	\$1.51	\$51.81
4	47	\$25.24	\$13.80	\$11.26	\$1.51	\$51.81
5	52	\$27.92	\$13.80	\$12.23	\$1.62	\$55.57
6	52	\$27.92	\$13.80	\$12.48	\$1.63	\$55.83
7	60	\$32.22	\$13.80	\$13.87	\$1.80	\$61.69
8	65	\$34.91	\$13.80	\$14.84	\$1.91	\$65.46
9	75	\$40.28	\$13.80	\$16.77	\$2.13	\$72.98
10	85	\$45.65	\$13.80	\$18.20	\$2.33	\$79.98

Notes:

Steps are 6 mos.

Apprentice to Journeyworker Ratio:1:4

SPECIALIZED EARTH MOVING EQUIP < 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	12/01/2021	\$36.24	\$13.41	\$16.01	\$0.00	\$65.66
SPECIALIZED EARTH MOVING EQUIP > 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	12/01/2021	\$36.53	\$13.41	\$16.01	\$0.00	\$65.95
SPRINKLER FITTER SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1	03/01/2022	\$64.36	\$10.44	\$22.10	\$0.00	\$96.90
	10/01/2022	\$66.06	\$10.44	\$22.10	\$0.00	\$98.60
	03/01/2023	\$67.76	\$10.44	\$22.10	\$0.00	\$100.30
	10/01/2023	\$69.51	\$10.44	\$22.10	\$0.00	\$102.05
	03/01/2024	\$71.31	\$10.44	\$22.10	\$0.00	\$103.85
	10/01/2024	\$73.11	\$10.44	\$22.10	\$0.00	\$105.65
	03/01/2025	\$74.91	\$10.44	\$22.10	\$0.00	\$107.45

Classification

Effective Date

Base Wage

Health

Pension

Supplemental
Unemployment

Total Rate

Apprentice - SPRINKLER FITTER - Local 550 (Section A) Zone 1**Effective Date -** 03/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$22.53	\$10.44	\$12.35	\$0.00	\$45.32
2	40	\$25.74	\$10.44	\$13.10	\$0.00	\$49.28
3	45	\$28.96	\$10.44	\$13.85	\$0.00	\$53.25
4	50	\$32.18	\$10.44	\$14.60	\$0.00	\$57.22
5	55	\$35.40	\$10.44	\$15.35	\$0.00	\$61.19
6	60	\$38.62	\$10.44	\$16.10	\$0.00	\$65.16
7	65	\$41.83	\$10.44	\$16.85	\$0.00	\$69.12
8	70	\$45.05	\$10.44	\$17.60	\$0.00	\$73.09
9	75	\$48.27	\$10.44	\$18.35	\$0.00	\$77.06
10	80	\$51.49	\$10.44	\$19.10	\$0.00	\$81.03

Effective Date - 10/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$23.12	\$10.44	\$12.35	\$0.00	\$45.91
2	40	\$26.42	\$10.44	\$13.10	\$0.00	\$49.96
3	45	\$29.73	\$10.44	\$13.85	\$0.00	\$54.02
4	50	\$33.03	\$10.44	\$14.60	\$0.00	\$58.07
5	55	\$36.33	\$10.44	\$15.35	\$0.00	\$62.12
6	60	\$39.64	\$10.44	\$16.10	\$0.00	\$66.18
7	65	\$42.94	\$10.44	\$16.85	\$0.00	\$70.23
8	70	\$46.24	\$10.44	\$17.60	\$0.00	\$74.28
9	75	\$49.55	\$10.44	\$18.35	\$0.00	\$78.34
10	80	\$52.85	\$10.44	\$19.10	\$0.00	\$82.39

Notes: Apprentice entered prior 9/30/10:
40/45/50/55/60/65/70/75/80/85
Steps are 850 hours

Apprentice to Journeyworker Ratio:1:3

STEAM BOILER OPERATOR OPERATING ENGINEERS LOCAL 4	12/01/2021	\$50.83	\$14.00	\$16.05	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN OPERATING ENGINEERS LOCAL 4	12/01/2021	\$50.83	\$14.00	\$16.05	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TELECOMMUNICATION TECHNICIAN ELECTRICIANS LOCAL 103	03/01/2022	\$44.71	\$13.00	\$18.74	\$0.00	\$76.45
	09/01/2022	\$46.42	\$13.00	\$18.87	\$0.00	\$78.29
	03/01/2023	\$48.34	\$13.00	\$19.01	\$0.00	\$80.35

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103

Effective Date - 03/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$20.12	\$13.00	\$0.60	\$0.00	\$33.72
2	45	\$20.12	\$13.00	\$0.60	\$0.00	\$33.72
3	50	\$22.36	\$13.00	\$15.06	\$0.00	\$50.42
4	50	\$22.36	\$13.00	\$15.06	\$0.00	\$50.42
5	55	\$24.59	\$13.00	\$15.43	\$0.00	\$53.02
6	60	\$26.83	\$13.00	\$15.79	\$0.00	\$55.62
7	65	\$29.06	\$13.00	\$16.16	\$0.00	\$58.22
8	70	\$31.30	\$13.00	\$16.53	\$0.00	\$60.83
9	75	\$33.53	\$13.00	\$16.91	\$0.00	\$63.44
10	80	\$35.77	\$13.00	\$17.27	\$0.00	\$66.04

Effective Date - 09/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$20.89	\$13.00	\$0.63	\$0.00	\$34.52
2	45	\$20.89	\$13.00	\$0.63	\$0.00	\$34.52
3	50	\$23.21	\$13.00	\$15.13	\$0.00	\$51.34
4	50	\$23.21	\$13.00	\$15.13	\$0.00	\$51.34
5	55	\$25.53	\$13.00	\$15.51	\$0.00	\$54.04
6	60	\$27.85	\$13.00	\$15.88	\$0.00	\$56.73
7	65	\$30.17	\$13.00	\$16.26	\$0.00	\$59.43
8	70	\$32.49	\$13.00	\$16.62	\$0.00	\$62.11
9	75	\$34.82	\$13.00	\$17.00	\$0.00	\$64.82
10	80	\$37.14	\$13.00	\$17.37	\$0.00	\$67.51

Notes:

Apprentice to Journeyworker Ratio:1:1

TERRAZZO FINISHERS	02/01/2022	\$56.09	\$11.39	\$22.34	\$0.00	\$89.82
BRICKLAYERS LOCAL 3 - MARBLE & TILE						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
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Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.05	\$11.39	\$22.34	\$0.00	\$61.78
2	60	\$33.65	\$11.39	\$22.34	\$0.00	\$67.38
3	70	\$39.26	\$11.39	\$22.34	\$0.00	\$72.99
4	80	\$44.87	\$11.39	\$22.34	\$0.00	\$78.60
5	90	\$50.48	\$11.39	\$22.34	\$0.00	\$84.21

Notes:

Apprentice to Journeyworker Ratio:1:3

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2021	\$42.58	\$9.10	\$17.72	\$0.00	\$69.40
For apprentice rates see "Apprentice- LABORER"						
TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2021	\$41.30	\$9.10	\$17.72	\$0.00	\$68.12
For apprentice rates see "Apprentice- LABORER"						
TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2021	\$41.18	\$9.10	\$17.72	\$0.00	\$68.00
For apprentice rates see "Apprentice- LABORER"						
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$50.83	\$14.00	\$16.05	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2021	\$36.82	\$13.41	\$16.01	\$0.00	\$66.24
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2021	\$53.41	\$9.10	\$18.17	\$0.00	\$80.68
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2021	\$55.41	\$9.10	\$18.17	\$0.00	\$82.68
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2021	\$45.48	\$9.10	\$18.17	\$0.00	\$72.75
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2021	\$47.48	\$9.10	\$18.17	\$0.00	\$74.75
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2021	\$36.24	\$13.41	\$16.01	\$0.00	\$65.66
WAGON DRILL OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
	06/01/2022	\$36.56	\$9.10	\$16.64	\$0.00	\$62.30
	12/01/2022	\$37.41	\$9.10	\$16.64	\$0.00	\$63.15
	06/01/2023	\$38.31	\$9.10	\$16.64	\$0.00	\$64.05
	12/01/2023	\$39.21	\$9.10	\$16.64	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
WAGON DRILL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2021	\$35.66	\$9.10	\$16.64	\$0.00	\$61.40
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2021	\$51.38	\$14.00	\$16.05	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS & GASFITTERS LOCAL 12</i>	03/01/2022	\$63.39	\$13.57	\$17.26	\$0.00	\$94.22
	09/04/2022	\$63.49	\$14.07	\$18.36	\$0.00	\$95.92
	02/26/2023	\$65.19	\$14.07	\$18.36	\$0.00	\$97.62
	09/03/2023	\$66.94	\$14.07	\$18.36	\$0.00	\$99.37
	03/03/2024	\$68.74	\$14.07	\$18.36	\$0.00	\$101.17
	09/01/2024	\$70.54	\$14.07	\$18.36	\$0.00	\$102.97
	03/02/2025	\$72.34	\$14.07	\$18.36	\$0.00	\$104.77
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						

Additional Apprentice Information:

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentice ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours.)

Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified.

** Multiple ratios are listed in the comment field.

*** APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.

**** APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.

WEEKLY PAYROLL RECORDS REPORT & STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law c. 149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided. A Payroll Form is available from the Department of Labor Standards (DLS) at www.mass.gov/dols/pw and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

On a weekly basis, every contractor and subcontractor is required to submit a certified copy of their weekly payroll records to the awarding authority; this includes the payroll forms and the Statement of Compliance form. The certified payroll records must be submitted either by regular mail or by e-mail to the awarding authority. Once collected, the awarding authority is required to preserve those records for three years from the date of completion of the project.

Each such contractor and subcontractor shall furnish weekly **and** within 15 days after completion of its portion of the work, to the awarding authority directly by first-class mail or e-mail, a statement, executed by the contractor, subcontractor or by any authorized officer thereof who supervised the payment of wages, this form, accompanied by their payroll:

STATEMENT OF COMPLIANCE

_____, 20____

I, _____,
(Name of signatory party) (Title)

do hereby state:

That I pay or supervise the payment of the persons employed by

_____ on the _____
(Contractor, subcontractor or public body) (Building or project)

and that all mechanics and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty nine of the General Laws.

Signature _____

Title _____

[illegible]

Are all apprentice employees identified above currently registered with the MA DLS's Division of Apprentice Standards?

For all apprentices performing work during the reporting period, attach a copy of the apprentice identification card issued by the Massachusetts Department of Labor Standards / Division of Apprentice Standards.

NOTE: Pursuant to MGL c. 149, s. 27B, every contractor and subcontractor is required to submit a **true and accurate** copy of their certified weekly payroll records to the awarding authority by first-class mail or e-mail. In addition, each weekly payroll must be accompanied by a statement of compliance signed by the employer. Failure to comply may result in the commencement of a criminal action or the issuance of a civil citation.

**SECTION 01 21 00
ALLOWANCES**

1.1 REFER TO SECTION 00 20 00 INSTRUCTIONS TO BIDDERS FOR ANY SPECIFIC REQUIREMENTS FOR CASH ALLOWANCES.

- A. The cash allowances listed in this Section 01 21 00 shall be included in the Bidders proposed Contract Price stated in Paragraph C of the Form for Bid.

1.2 EARTHWORK ALLOWANCES:

- A. Unsuitable Materials: As outlined in 31 00 00 (Earthwork), the Contractor shall include in the Contract Price the excavation and disposal of **10 (Ten) Cubic Yards** of Unsuitable (uncontaminated) Material (as defined in 31 00 00 1.2.B/6) beyond the lines and grades otherwise necessary for the execution of the Work as specified on the Drawings, at a Unit Price of **\$45.00 per Cubic Yard** (a total allowance of \$450). Should this work not be performed, a Credit shall be applied to the Contract Price as outlined therein.
- B. Rock or Ledge: As outlined in 31 00 00 (Earthwork), the contractor shall include in the Contract Price the excavation and disposal of **10 (Ten) Cubic Yards** of Ledge, Boulders, or Foundations (as defined in 31 00 00 1.2.B.7) necessary for the execution of the Work as specified on the Drawings, at a **Unit Price of \$75.00 per Cubic Yard** (a total allowance of \$750). Should this work not be performed, a Credit shall be applied to the Contract Price as outlined in 31 00 00 1.2.B.7. Should additional removals be necessary, the Contract Price may be increased as outlined therein.

- END OF SECTION 01 21 00 -
ALLOWANCES

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SECTION 01 23 00 ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. All of the Contract Documents, including the conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the information and associated Work under this Section.
- B. The Contractor shall carefully examine all the Contract Documents for requirements that affect the work of this Section. The exact scope of this Section cannot be determined without a thorough review of all specification sections and other Contract Documents.

1.2 SUMMARY

- A. The Schedule of Alternates included in this Section lists all the Alternates that appear in the Contract Documents, and the Specification Sections which are affected by each Alternate.
- B. For each of the Alternates scheduled at the end of this Section, bidders shall state the amount in the proposal to be added to the Contract Sum for the work.
- C. Consult the individual Specification Sections and the Drawings for detailed requirements of each Alternate.

1.3 GENERAL INSTRUCTIONS

- A. Each Bidder shall be held fully responsible for examining the scope of the Alternates generally defined herein and for recognizing any modifications to his work caused by any Alternate.
- B. The Bid Alternate Price shall be complete cost, including overhead, profit, bonds, insurance, transportation, and all other costs connected with, or incidental to, the work described.
- C. Alternates listed below in the Schedule of Alternates are listed in order. The Contract will be awarded on the basis of the Base Bid only, or the Base Bid plus any number of Alternates strictly added in order.

1.4 ALTERNATES

- A. Definition: "Alternates" are alternate products, materials, equipment, systems, methods, units of work, or major elements of the construction, which may, at the Authority's option and under the terms established by the Contract or Agreement, be selected for the work in lieu of the corresponding requirements of the Contract Documents or in addition to the work of the Base Bid as noted.
- B. Alternate Requirements: A Schedule of Alternates is included at the end of this Section. Each Alternate is defined using abbreviated language, recognizing that the Contract Documents define the requirements. Coordinate related work to ensure that work affected by each Alternate is complete and properly interfaced with work of each selected Alternate.
- C. Provide written proposals for each Alternate on the Bid Form for the Authority's consideration. Each proposal amount shall include the entire cost of the Alternate

portion of the work, including overhead, profit, and other costs including cost of interfacing and coordinating the Alternate with related and adjacent work.

1.5 SCHEDULE OF ALTERNATES

- A. Alternate No. 1 – Install new metal frame and HPL or FEG signage panel in lieu of reinstallation of salvaged existing sign post.
1. Work:
 - a. DEDUCT the reinstallation of the existing salvaged sign and wooden post, indicated as “Base Bid” on Sheet L2.0. (Town to have right of refusal on salvaged sign; if not desired by Town, Contractor shall be responsible for disposal.)
 - b. ADD the furnishing and installation of the powdercoated sign frame and custom high-pressure-laminate or fiberglass-embedded-graphic panel and footings, indicated as “Add Alt. # 1” on Sheet L2.0 and Detail 3 on Sheet L5.1.
 2. Refer to the following Specification sections for the work of Alternate No. 1:
 - a. Section 32 33 00 – Site Furnishings
- B. Alternate No. 2 – Furnish and install the recycled plastic timber boardwalk/bridge and associated footings and surfacing.
1. Work:
 - a. ADD the furnishing and installation of the recycled plastic timber bridge structure and associated footings, as well as associated stabilized stone dust paving and crushed stone surfacing, indicated as “Add Alt. #2” on Sheet L2.0 and L3.0 and Detail 5 on Sheet L5.0.
 2. Refer to the following Specification sections for the work of Alternate No. 3:
 - a. Section 32 10 00 – Bases Ballasts Paving & Edging
 - b. Section 32 33 00 – Site Furniture
- C. Alternate No. 3 – Install the indicated area of Stabilized Stone Dust Paving and associated bike racks.
1. Work:
 - a. ADD the removal and disposal of existing vegetation, lawn, and topsoil, and field relocation of existing boulders, as needed to install improvements, indicated as “Add Alt. #3” on sheet L1.0.
 - b. ADD the furnishing and installation of stabilized stone dust pavement and of four (4) metal bicycle racks, indicated as “Add Alt. #3” on Sheets L2.0, L3.0, and L3.1 and Details 1 on Sheet L5.0 and 4 on Sheet L5.1.
 2. Refer to the following Specification sections for the work of Alternate No. 2:
 - a. Section 02 41 00 – Site Preparation and Demolition
 - b. Section 32 10 00 – Bases Ballasts Paving Edging
 - c. Section 32 33 00 – Site Furniture

END OF SECTION

SECTION 01 33 00 SUBMITTALS

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. The work to be performed under this Section shall include the compilation and submittal of all required shop drawings, manufacturer's cuts, specifications, and certifications of all materials and equipment for the Landscape Architect's approval. Actual product samples may also be required as stipulated in the technical specifications sections.
- B. All submittals shall be submitted within four (4) weeks after the award of the contract, and may be made and distributed digitally with the approval of the Owner via email or File Transfer Protocol (FTP) site. Alternatively, submittals may be made in hard copy form; three (3) copies (Contractor, Owner's Rep, and Landscape Architect) shall be in three (3) submittal packages so that manuals can be prepared for office and field reference.

PART 2 - SUBMITTALS

2.1 REQUIREMENTS

- A. References are made throughout the Specifications and Drawings where submittals are required. All finishes, colors, and patterns are to be reviewed and approved by submittal or field sample.
- B. Where the Contractor's intention is to furnish the materials or equipment as specified, a list of all such elements, by Specification section, shall accompany the submittals so that the entire submittal is complete for the project.

PART 3 - EXECUTION

3.1 SUBMISSIONS

- A. Submit all documents and data either in a collated, manual format, with three (3) manuals to be submitted; OR distributed digitally with the approval of the Owner. Include a Table of Contents of the material for reference. The submittal is to be entire and complete, addressing all furnishings and installation.
- B. Submit all required product or material samples concurrent with the materials/equipment information manuals described above. Each submittal shall reference its appropriate specification section, part and paragraph.

END OF SECTION

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SECTION 01 41 00 PERMITS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the work under this Section.
- B. The Contractor shall perform the work in accordance with the Contract Documents and any applicable municipal requirements.

1.2 SCOPE OF WORK

- A. The Contractor shall be responsible for obtaining all permits required to complete the work of this contract, to provide all coordination and furnish all bonds, assurances and required warranties. As applicable, the Contractor shall be responsible for any/all fees associated with the securing of permits necessary for the execution of the work of this contract. Should any street work be required, an approved Town contractor shall perform it.

1.3 PERMITS BY CONTRACTOR

- A. The Contractor shall prepare permit applications and obtain applicable permits after the contract is awarded, **bearing all expenses**. All required permits shall be obtained according to local codes.

1.4 DIGSAFE

- A. Contact Digsafe seventy-two (72) hours prior to initiating work at telephone (888) 344-7233.
- B. Contractor shall submit Digsafe Record Number to Landscape Architect for the project record.

PART 2 - MATERIALS

2.1 GENERAL

- A. All materials and equipment shall conform to permit requirements and the Town's standards for utilities, excavation, backfill, patching, and surveying or other work unless otherwise stated in these specifications. Coordinate as necessary with the appropriate Town official and/or private utility.

PART 3 - EXECUTION

3.1 APPROVALS AND GUARANTEES

- A. Execute all work per permit requirements. All plumbing and electric work to be approved by Town Inspectors.
- B. Guarantee all work per permit requirements.

END OF SECTION

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SECTION 01 56 00 TEMPORARY BARRIERS AND ENCLOSURES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the work under this Section.
- B. All references to products by manufacturer, trade name or performance Specifications bearing the connotation "or Approved Equal" shall be as determined by the Landscape Architect and the Town, per MGL c. 30 s. 39M, part b, criteria 1.

1.2 WORK INCLUDED

- A. Provide all labor, equipment, implements and materials required to furnish, install, construct and perform all site improvements complete as shown on the Drawings and specified herein.
- B. To be included, but not limited to the following:
 - 1. Temporary Construction Perimeter Fencing;
 - 2. Tree or Plant Protection Fencing as indicated on the Drawings;
 - 3. All other temporary barriers and controls needed for protection of the public during construction.

1.3 REFERENCES

- A. Examine all other Sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of other trades. Cooperate with all trades and all departments of the Town and coordinate all work under this Section therewith.
- B. The following related items are included under the Sections listed below:
 - 1. Section 01 57 00 – Environmental Protections;
 - 2. Section 02 41 00 – Site Preparation and Demolition;
 - 3. Section 10 14 00 – Project Signage.

1.4 SUBMITTALS

- A. Shop Drawings and Samples
 - 1. Provide complete Shop Drawings and/or samples and catalog cuts for all items called for on the Drawings and as specified and in accordance with applicable requirements under Division 1.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in manufacturer's original unopened and undamaged packages with labels legible and intact.
- B. Store materials in unopened packages in a manner to prevent damage from the environment and construction operations.
- C. Handle in accordance with manufacturer's instructions.

- D. The Contractor shall be solely responsible for all materials stored on the site once delivered. Any materials left unsecured at the job site shall be solely at the contractor's own risk.

1.6 DEFINITIONS

- A. The following items are included herein and shall mean:
 - 1. NCLMA – National Chain Link Manufacturers' Association;
 - 2. OSHA – Occupational Safety and Health Act.

PART 2 - MATERIALS

2.1 BARRIERS AND BARRICADES

- A. Provide barriers to prevent unauthorized entry to construction areas to allow for Owner's use of site, and to protect existing facilities and adjacent properties from damage from construction operations.
 - 1. Comply with standards and code requirements for erection of structurally adequate barriers.
 - 2. Install barriers of a neat and uniform appearance.
 - 3. Provide graphics and signs warning of the hazard being protected against.
 - 4. Where appropriate and needed provide lighting, including flashing red or amber lights.
 - 5. Provide barriers at public rights-of-way and for public access to existing buildings when adjacent to construction operations.
- B. Provide barricades with blinking beacon light at all open trenches and other excavations.
- C. Provide protection as specified below for plant life designated to remain.
- D. Protect non-owned vehicular traffic, stored materials, site and structures from damage.

2.2 TEMPORARY CONSTRUCTION FENCING

- A. Prior to any excavation work the Contractor shall provide temporary construction fencing as shown on the Drawings and/or as required to completely protect the work area and injury to persons or property.
- B. The Contractor shall furnish and install temporary fencing of the following type in all areas where existing fencing lengths are inadequate to enclose the construction.
 - 1. Chain link fencing, six feet (6') high min., fabricated from No. 9 gauge galvanized wire woven in a 2" diamond mesh with top salvage and having galvanized steel H or pipe intermediate and terminal posts. Post spacing shall not exceed eight feet (8') on center. Cross bracing, reinforcing gates and other parts of fencing shall conform to standard Specifications of the National Chain Link Manufacturers Association. All posts shall be set into temporary concrete footings or on temporary chain link fencing stands as approved by the Landscape Architect.
- C. The Contractor shall furnish and install matching gates equipped with suitable locks and other hardware where necessary to provide access for construction apparatus

or fire fighting equipment. The Owner shall be provided with a copy of the key used for all locks.

2.3 TEMPORARY WORK IN PUBLIC WAYS

- A. Prior to commencing any work in public ways and other areas which are legally used by vehicles or pedestrians, the Contractor shall submit in writing the proposed methods of protection to the Official. Work shall not be commenced in these areas until written approval is received from the Official.
- B. In general, all excavations in public ways shall be protected by substantial barriers which will offer complete protection against accidents for pedestrian and vehicular traffic without interrupting the normal flow of traffic. All barriers must be properly lighted with electric or battery powered safety lights and must be maintained in good working order by the Contractor for the duration of the time such barriers are required.
- C. Trenches across sidewalks shall be completely covered with a temporary walkway, comprised of properly supported nominal 2" thick lumber laid with butt joints and covered with exterior grade plywood, 1/2" minimum thickness. Provide continuous 2" x 4" rails and posts secured to the temporary walkway conforming to the requirements of the Occupational Safety and Health Act (OSHA).
- D. Wherever temporary chutes are to be extended over sidewalks or other pedestrian or vehicular traffic areas, the bottom and sides of the chutes shall be provided with continuous dustproof and weatherproof lining, applied to the exterior surfaces.
- E. The Contractor will be required to furnish, install, and maintain in good condition, at no increase in Contract Price or Contract Time, all other safety measures which in the judgment of the Official are required to protect the public from accidents due to work performed under this Contract. This requirement is supplementary to the Contractor's rights and obligations to provide and employ safety measures as s/he may deem necessary or as may be required by law or standard safety practices.

2.4 TREE PROTECTION FENCING

- A. Where indicated on the Drawings or as specified elsewhere, tree protection fencing shall be installed to protect existing trees to remain, in accordance with 01 57 00 and 02 41 00, and with the Details shown on the Drawings.
- B. Tree Protection Materials (if not otherwise specified elsewhere):
 - 1. Posts: 2 inch by 4 inch pressure treated wood spaced 5' on center.
 - 2. Fencing: Shall be a heavy-duty bright orange 2.5"-max diamond-mesh HDPE safety/barrier fence with tensile strength of at least 250 lb/ft, 4'-0" high, with smooth upper and lower edges, "Sentry HD" by Tenax of Baltimore, MD or Approved Equal. Fencing shall be stapled with construction-grade staples to each post at a minimum of 3 locations.
 - 3. Exposed height above grade: 4 feet.
 - 4. Minimum post embedment: 18 inches.
 - 5. Stake or spray layout of all proposed work under the driplines of existing trees for approval before beginning construction. Install fencing over the greatest extent feasible within the driplines of the trees, allowing for the work.
 - 6. Maintain fencing in sound condition until project completion. Do not relocate installed fencing without the express approval of the Landscape Architect.

PART 3 - EXECUTION

3.1 BARRIERS, BARRICADES AND ENCLOSURES

- A. Install temporary items as specified herein and in the Drawings or, where not specified, to level of quality suitable for the intended purpose as judged by the Project Consultant.

3.2 REMOVAL OF TEMPORARY BARRIERS, ENCLOSURES AND PROTECTIONS

- A. Remove temporary barriers, barricades, fencing, enclosures and protections as warranted by the progress of the Work and prior to Substantial Completion.
- B. Remove in-ground elements of all temporary barrier installations (if any) completely. Grade site as noted.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition at start of work or as specified elsewhere in the Contract Documents.

END OF SECTION

SECTION 01 57 00 ENVIRONMENTAL PROTECTIONS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the work under this Section.

1.2 SCOPE OF WORK

- A. The work covered by this section of the specifications consists of furnishing all labor, materials, tools and equipment and performing all work required for the prevention of environmental pollution during and as a result of construction under this contract.
 - 1. Implementation
 - 2. Area of Construction Activity
 - 3. Protection of Water Resources
 - 4. Protecting and Minimizing Exposed Areas
 - 5. Location of Storage Areas
 - 6. Protection of Landscape
 - 7. Specific Measures for Tree Protection
 - 8. Clearing and Grubbing
 - 9. Discharge of Dewatering Operations
 - 10. Dust Control
 - 11. Separation and Replacement of Topsoil
 - 12. Baled Hay or Straw
 - 13. Silt Fence
 - 14. Noise Control

1.3 NOTIFICATION

- A. The Landscape Architect or Owner's Representative will notify the Contractor in writing of any non-compliance with the foregoing provisions. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails to act promptly, the Landscape Architect or Owner's Representative may order stoppage of all or part of the work until satisfactory corrective action has been taken. No claim for an extension of time or for excess costs or damage incurred by the Contractor as a result of time lost due to any stop work orders shall be made unless it was later determined that the Contractor was in compliance.

PART 2 - MATERIALS

2.1 BALED HAY OR STRAW

- A. To trap sediment and to prevent sediment from clogging drainage systems, baled hay or straw shall be used where shown on Drawing L-1.0 – Demolition and Removals Plan and/or around all drainage structures to remain, if not shown. Care shall be taken to keep the bales from breaking apart. The bales should be securely staked to prevent overturning, flotation, or displacement. All deposited sediment shall be removed periodically.

2.2 SILT FENCE

- A. Where indicated on the drawings and where directed by the Landscape Architect or Owner's Representative, the Contractor shall erect and maintain a temporary silt fence. The silt fence shall be used specifically to contain sediment from runoff water and to minimize environmental damage caused by construction.
- B. The silt fence shall consist of a 3-foot wide continuous length sediment control fabric, stitched to a 22-foot wide, continuous length support netting, and stapled to pre-weathered hardwood posts installed as shown on the drawings. The oak posts shall be 1¼" by 1¼" (Minimum Dimension) by 48" and shall be tapered. The support netting shall be industrial strength polypropylene. The bottom edge of the sediment control fabric shall be buried as shown on the drawings. The sediment control fabric shall conform to the following properties:

PROPERTY	VALUE	TEST METHOD
1. Grab Strength (lbs.)	124	ASTM D-4632
2. Elongation (%)	15%	ASTM D-4632
3. Puncture Strength (lbs.)	60	ASTM D-4833
4. Burst Strength (psi)	300	ASTM D-3786
5. Trapezoid Tear (lbs.)	65	ASTM D-4533
6. Equivalent Opening Size (U.S. Sieve)	NO. 30	ASTM D-4571
7. Permittivity (sec ⁻¹)	0.10	ASTM D-4491
8. Water Flow Rate (gal/min/sf.)	10	ASTM D-4491
9. Uv Resistance (%)	70	ASTM D-4355

- C. The silt fence shall be Mirafi Envirofence manufactured by Mirafi, Inc. or an Approved Equal.

PART 3 - EXECUTION

3.1 IMPLEMENTATION

- A. Prior to commencement of work, the Contractor shall meet with the Landscape Architect and Owner's Representative to develop mutual understandings relative to compliance of the environmental protection program.

- B. The Contractor shall submit for approval details and literature fully describing environmental protection methods to be employed in carrying out construction activities.

3.2 AREA OF CONSTRUCTION ACTIVITY

- A. Insofar as possible, the Contractor shall confine his construction activities to those areas defined by the Contract Drawings and Specifications. All land resources within the project boundaries and outside the limits of permanent work performed under this contract shall be preserved in their present condition or be restored to a condition, after completion of construction, at least equal to that which existed prior to work under this contract.

3.3 PROTECTION OF WATER RESOURCES

- A. The Contractor shall not pollute wetlands, streams, lakes, ponds or reservoirs with fuels, oils, bitumens, calcium chloride, acids, solvents, or other harmful materials. The Contractor shall also prevent the transport of soil, dirt, and salt to surface streams, wetlands, water bodies and/or catch basins. It is the Contractor's responsibility to comply with all applicable Federal, State, County and Municipal laws regarding pollution of wetlands, rivers and streams.
- B. Special measures should be taken to insure against spillage of any pollutants into public waters, and run-off of demolition site sediments into stormwater collection systems. Measures shall include placement of haybales around catch basins and along temporary construction fencing, and where so indicated on Drawing L-1.0 and L1.1 – Demolition & Removals Plan.

3.4 PROTECTING AND MINIMIZING EXPOSED AREAS

- A. The Contractor shall limit the area of land which is exposed and free from vegetation during construction. In areas where the period of exposure will be greater than two (2) months, temporary vegetation, mulching or other protective measures shall be provided as specified.
- B. The Contractor shall take account of the conditions of the soil where temporary cover crop will be used to ensure that materials used for temporary vegetation are adaptive to the sediment control. Materials to be used for temporary vegetation shall be approved by the Landscape Architect and Owner's Representative.

3.5 LOCATION OF STORAGE AREAS

- A. The location of the Contractor's storage areas for equipment and/or materials shall be placed upon cleared portions of the job site or areas to be cleared as a part of this project and shall require written approval of the Landscape Architect and Owner's Representative.
 - 1. Plans showing storage facilities for equipment and materials shall be submitted for approval of the Landscape Architect and Owner's Representative prior to the start of construction. Temporary storage trailers shall be installed at Contractor's cost.
 - 2. Contractor shall not store equipment or materials under tree drip lines, see Section 01 57 00 – 3.6.D below.
- B. No excavated materials or materials used in backfill operations shall be deposited within a minimum distance of one hundred (100) feet of any drainage facility. Adequate measures for erosion and sediment control such as the placement of

baled hay or straw around the downstream perimeter of stockpiles shall be employed to protect any downstream areas from siltation.

- C. There shall be no storage of equipment or materials in areas designated on the Contract Drawings as within a wetlands buffer zone.

3.6 PROTECTION OF LANDSCAPE, TREES, AND PLANTINGS

A. General Information:

1. The Contractor shall not deface, injure, or destroy trees or shrubs nor remove or cut them without written authority from the Owner. No ropes, cables, or guys shall be fastened to or attached to any existing trees for anchorages unless specifically authorized by the Landscape Architect or Owner's Representative. Excavating machinery and cranes shall be of suitable type and be operated with care to prevent injury to trees which are not to be removed, particularly overhanging branches and limbs. The Contractor shall, in any event, be responsible for any damage resulting from such use.
2. Branches, limbs, and roots shall not be cut except by permission of the Landscape Architect or Owner's Representative. All cutting shall be smoothly and neatly done without splitting or crushing. When there is unavoidable injury to branches, limbs and trunks of trees, the injured portions shall be neatly trimmed and covered with an application of grafting wax or tree healing paint as directed.
3. All trees that may possibly be defaced, bruised, injured, or otherwise damaged by the Contractor's equipment or other operations shall be protected by placing protective measures as described in 3.7 below. Any trees or landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition at the expense of the Contractor. The Landscape Architect or Owner's Representative will decide what method of restoration shall be used, and whether damaged trees shall be treated and healed or removed and disposed of.
4. Cultivated hedges, shrubs, and plants which could be injured by the Contractor's operations shall be protected by suitable means or shall be dug up, balled and temporarily replanted and maintained. After construction operations have been substantially completed, they shall be replanted in their original positions and cared for until growth is re-established. If cultivated hedges, shrubs, and plants are injured to such a degree as to affect their growth or diminish their beauty or usefulness, they shall be replaced by items of a kind and quality at least equal to that existing at the start of the work.

B. Preparation:

1. Verify that existing plant life and features designated to remain are tagged or identified.
2. Identify branches and roots that may interfere with construction.

C. Continuous Protection of Trees and Plants:

1. Protect existing trees scheduled to remain against injury or damage, including cutting, breaking, or skinning of roots, trunks, or branches; smothering by stockpiled construction materials, excavated materials or vehicular traffic within branch spread.

2. Protect designated trees with a temporary 6 foot high double rail wood fence enclosure or as otherwise specified on the Drawings:
 - a. The limits of tree protection fencing shall be installed AT THE DRIP LINE of trees wherever feasible, or at the maximum extent practicable where not feasible. At NO POINT shall tree protection fencing be installed at a distance less than 3 times the caliper of the tree from the root flare without the express permission of the Landscape Architect.
 3. Erect temporary fencing before commencing site preparation work.
 4. Maintain fencing during entire construction period.
 5. See also 3.7 below for further information on tree protection measures.
- D. Root System Protection:
1. The Contractor shall not permit the storage of construction materials, debris, or excavated material within the drip line, which is the outer perimeter of branches.
 2. The Contractor shall not permit vehicles within the drip line. Restrict foot traffic to prevent excessive compaction of soil over root systems.
 3. The Contractor shall protect tree root systems from damage due to noxious materials in solution caused by run-off or spillage during mixing and placement of construction materials or drainage from stored materials.
 4. The Contractor shall protect root systems from flooding, erosion, continuous running water or excessive wetting resulting from dewatering operations.
- E. Relocate and protect large boulders and rocks identified by Owner to remain as final landscaping elements, if applicable.
- F. Root and Branch Trimming:
1. Consult with Project Consultant to request removal of roots and branches that interfere with construction.
 2. Upon Project Consultant's approval of branch or root removal, employ qualified Landscape sub-contractor shall:
 - a. Remove branches from trees, which shall remain, if required to clear new construction.
 - b. Carefully and cleanly cut roots and branches of trees indicated to remain, where roots and branches obstruct new construction, with sharp pruning instruments. Sterilize pruning instruments before beginning work on site and sterilize between plants if disease is observed on site or prevalent in the region. Do not break or chop roots or branches. Use a three-part cut for large limbs. For fastest healing, prune close to the main branch without injuring the bark ridge or branch collar areas.
 - c. Recommend procedures to compensate for loss of roots and perform initial pruning of branches and stimulation of root growth where removed to accommodate new construction.
 - d. Extend pruning operation to restore natural shape of entire tree.
- G. Excavation Around Trees:
1. Excavate within drip line of trees only where indicated.

2. Where trenching for utilities is required within the drip line, tunnel around roots by hand digging.
 3. Shall not cut main lateral roots or tap roots; cut smaller roots, which interfere with installation of new work.
 4. Cut roots with sharp pruning instruments: Do not break or chop.
 5. Shall not allow exposed roots to dry out before permanent backfill is placed:
 - a. Provide temporary earth cover, or pack with peat moss and wrap with burlap.
 - b. Water and maintain in moist condition and temporarily support and protect from damage until permanently relocated and covered with earth.
 - c. Landscape sub-contractor shall prune branches to balance loss to root system caused by damage or cutting of root system.
- H. Grading and Filling Around Trees:
1. Maintain existing grade within drip line of trees, unless otherwise indicated.
 2. Lowering Grades:
 - a. Where existing grade is above new finish grade shown around trees, carefully hand excavate within drip line to new finish grade.
 - b. Cut roots exposed by excavation or provide permanent protections as recommended by Landscape sub-contractor.
- I. Raising Grades:
1. Minor Filling:
 - a. Where existing grade is six inches or less below elevation of finish grade shown, use a topsoil fill material.
 - b. Place in single layers and do not compact; hand grade to required finish elevations.
 2. Moderate Filling:
 - a. Where existing grade is more than 6 inches, but less than 12 inches, below finish grade elevation, place a layer of drainage fill on existing grade prior to placing topsoil.
 - b. Balance of area within drip line perimeter: Place drainage fill to an elevation six inches below grade and complete fill with a layer of topsoil to finish grade elevation.
 - c. Shall not compact stone or gravel or topsoil layers; hand grade to required elevations.
- J. Repair and Replacement of Trees:
1. Repair trees damaged by construction operations. Damage shall be assessed with Landscape Architect and Owner prior to repairs. Make repairs promptly after damage occurs to prevent progressive deterioration of damaged trees.
 2. Remove and replace dead and damaged trees, which are determined by the Landscape sub-contractor shall be incapable of restoration to normal growth pattern.

3. Provide new trees of same size and species as those replaced, up to 6 inch caliper. For replacement of trees over 6 inches in caliper taken 12 inches above grade, provide new trees of 6 inch caliper, and of the same species as selected by the Project Consultant.
4. Repair and replacement of trees scheduled to remain and damaged by construction operations or lack of adequate protection during construction operations shall be at Contractor's expense.

3.7 SPECIFIC MEASURES FOR TREE PROTECTION

- A. All existing trees not specifically indicated for removal or transplanting on the Drawings shall be protected as identified below.
- B. Tree protection fencing shall be installed and maintained throughout the period of construction as shown on the Drawings; specific attention is directed to the Demolition and Removals Plan, Sheet L-1.0.
 1. The limits of tree protection fencing shall be installed AT THE DRIP LINE of trees wherever feasible, or at the maximum extent practicable where not feasible. At NO POINT shall tree protection fencing be installed at a distance less than 3 times the caliper of the tree from the root flare.
 2. Prior to commencing any demolition or removals, the Contractor shall lay out all paving and demolition required within the drip lines of all trees and shall establish in the field with the Landscape Architect and the Owner's Representative the extents and limits of tree protection fencing to be installed.
 3. If, after demolition is complete, tree protection fencing can be expanded to cover a greater area, the Contractor shall revise the fencing line as directed by the Landscape Architect or Owner's Representative.
 4. Areas within tree protection fencing shall be protected from disturbance, excavation, and compaction.
- C. ALL EXCAVATIONS and ALL REMOVALS within the drip lines of existing trees (NOT limited to areas within tree protection fencing) shall be HAND WORK or AIR SPADE only. Cut no roots without the express permission of Landscape Architect or Owner's Representative.
- D. DO NOT REMOVE any existing drainage fabric, soil separator fabric, or other geotextiles in the vicinity of protected trees without the prior approval of the Landscape Architect or Owner's Representative to avoid damage to feeder roots which often intertwine with the fabric. Where necessary, Contractor shall cut fabric and leave areas entangled by roots in place in the ground.
- E. For all earthwork, excavation, and removals within the driplines of protected trees (not limited to areas within designated tree protection fencing), the Owner's Representative or Landscape Architect must be present on the site or have specifically waived that obligation in writing to the Contractor to ensure tree protection measures are being observed. Provide 48 hours' notice prior to commencement of all such work.

3.8 CLEARING AND GRUBBING

- A. No clearing or grubbing shall be permitted without the express written consent of the Landscape Architect and the Owner's Representative.

- B. If Clearing and Grubbing is permitted:
1. After providing fenced protection for trees and plants to remain, clear and grub site areas as directed.
 2. Selective Clearing:
 - a. In areas where trees shall remain, remove all undergrowth, dead trees, stumps, roots, vines, and other debris.
 - b. Strip grass materials to a maximum depth of 1 inch under tree canopies.
 - c. Carefully till or scarify existing grade to a depth of 1 inch.
 3. Grubbing: Scarify the areas where vegetation or other unsuitable materials occur to a minimum depth of 6 inches until all such materials are loosened and remove from the site.
 - a. Use only hand methods for grubbing inside the drip line of trees indicated to remain.
 - b. Fill depressions caused by clearing and grubbing operations with satisfactory soil materials and compact and grade in accordance with Division 2 requirements.
 4. Remove and stockpile topsoil under provisions of Division 2 except where removal shall be detrimental to existing trees and plants.

3.9 DISCHARGE OF DEWATERING OPERATIONS

- A. Any water that is pumped and discharged from a trench and/or excavation as part of the Contractor's water handling shall be filtered by an approved method prior to its discharge into a receiving water or drainage system.
- B. The pumped water shall be filtered through baled hay, a vegetative filter strip or a vegetated channel to trap sediment occurring as a result of the construction operations. If used, the vegetated channel shall be constructed in a location specifically approved by the Landscape Architect and Owner, and shall be designed such that the discharge flow rate shall not exceed a velocity of more than 1 foot per second. Accumulated sediment shall be cleared from the channel periodically.
- C. Contaminated dewatering effluent shall be handled, and if necessary, disposed of in accordance with applicable regulations and permits. Any required monitoring and analysis of the effluent shall be performed by the Contractor and the laboratory results shall be submitted to the Landscape Architect and Owner's Representative.
- D. Water pumped or drained from excavations, water courses, or other structures encountered in the work shall be disposed of in strict compliance with pertinent federal, state and local environmental regulations. Any damage caused by or resulting from dewatering operations shall be the sole responsibility of the Contractor.

3.10 DUST CONTROL

- A. During the progress of the work, the Contractor shall conduct his operations and maintain the area of his activities, including sweeping and sprinkling of streets as necessary, to minimize creation and dispersion of dust. If the Landscape Architect or Owner's Representative decides it is necessary to use calcium chloride for more effective dust control, the Contractor shall furnish and spread the material, as directed.

3.11 SEPARATION AND REPLACEMENT OF TOPSOIL

- A. Topsoil approved by the Owner and Landscape Architect for reuse shall be carefully removed from areas where excavations are to be made, and separately stored to be used again as directed. The topsoil shall be stored in an area acceptable to the Landscape Architect or Owner's Representative and adequate measures shall be employed to prevent erosion of said material.
- B. Topsoil proposed for reuse shall be tested in accordance with 32 90 00, Planting.

3.12 NOISE CONTROL

- A. The Contractor shall adhere to the Town ordinances for Noise Control throughout the construction period. Noise control will be strictly enforced by the Town.
- B. No construction shall occur between 7pm-7am Monday through Friday, or any time on Saturday or Sunday without prior written approval. Any exemption to prohibited construction hours must be authorized by a Town representative.
- C. Contractor shall not permit engine idling on the job site. This shall be enforced through random, unannounced periodic inspections.

END OF SECTION

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SECTION 01 71 00 CONSTRUCTION LAYOUT

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. The conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the work under this Section.
- B. The work under this section shall consist of field staking the horizontal and vertical alignment of all essential features and proposed work, including walls, curbs, sidewalks, fencing, drainage, electrical and utility structures, plantings, furnishings, play equipment, and other related features as shown on the plans. The Contractor shall familiarize himself with the existing conditions and shall be responsible for locating or re-establishing survey field ties, property lines, and benchmarks indicated on the plans.

PART 2 - MATERIALS

2.1 LAYOUT AND STAKING

- A. The Contractor shall be responsible for furnishing all stakes, pins, and grade markings as required to implement the work of layout and staking and shall make all field adjustments ordered by the Landscape Architect or Owner's Representative at no extra cost to the Owner.
- B. Upon request by the Landscape Architect or Owner's Representative, the Contractor shall make available to the Owner survey instruments and operator necessary to check the proposed vertical and horizontal alignments at no extra cost.

PART 3 - EXECUTION

3.1 SURVEY LAYOUT

- A. The Contractor shall use the alignments shown on the plans to establish the layout of all proposed features and shall perform field adjustments as ordered by the Landscape Architect or Owner's Representative.
- B. All layout shall be by the dimensions noted on the Drawings; do not scale directly from the plans. If clarification regarding a dimension or intended layout procedure is required, contact the Landscape Architect.
- C. All dimensions marked on the Drawings with "+/-" or "(Confirm)" are intended for confirmation of conformance to the expected conditions and (where applicable) that acceptable slopes and clearances are provided. Once layout has been established using other dimensions, the Contractor shall verify these dimensions (to within a tolerance of 1/2") and report any discrepancy to the Landscape Architect for acceptance or instruction regarding adjustment. These confirmation dimensions should not be used to lay out elements.
- D. The Contractor shall lay out the essential or necessary grades and locations of site furnishings, footings, pavements, utilities, structures and other proposed elements. The Contractor shall verify the location of any existing spikes, stakes, pipes, drill holes, etc. and shall be responsible for their accuracy. Proposed features shall be

located in relation to dimensions shown on the drawings and as adjusted by the Landscape Architect.

- E. The Contractor shall inform the Landscape Architect and Owner's Representative when the general layout is completed and shall not begin excavation until the Landscape Architect approves the various alignments. Any discrepancies encountered in field conditions shall be reported to the Landscape Architect and Owner's Representative immediately and shall be adjusted as directed.
- F. The Contractor shall be responsible for maintaining the correct vertical and horizontal alignment of all elements, which responsibility shall not be waived by the Landscape Architect's approval of basic layout and stakeout.

END OF SECTION

SECTION 01 78 00 CLOSEOUT DOCUMENTATION

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. The work to be performed under this Section shall include the compilation and submittal of all required maintenance manuals, maintenance and repair products, warranty information, detailed procedures, product information, submittal records, as-built drawings, and certifications of all materials and equipment for the Landscape Architect's approval. Additional submissions may also be required as stipulated in the technical specifications sections.
- B. Upon Final Completion of all park construction, the contractor shall submit: three complete copies of a park maintenance manual, and three copies of an as-built drawing set, with three compact disc (CD) copies of the as-built drawings.
- C. The Owner will not issue the final check for park retainage until the submittal and approval of the maintenance manual and as-built drawings.

PART 2 - SUBMITTALS

2.1 MAINTENANCE MANUAL

The Maintenance shall be in the form of a three ring binder, organized and tabbed into appropriate sections, and shall include the following items:

- A. A complete landscape maintenance plan with recommended maintenance schedules and procedures for all park systems including: watering, fertilization, spring start up procedures, fall clean-up, park winterization procedures, and all maintenance recommended or required by the manufacturers of included products;
- B. A letter from the contractor stating the period of warranty for all parts, materials, and workmanship, from the date of Final Completion;
- C. All product information, product directions, and warranties;
- D. List of all plant material;
- E. Copies of municipal permits with signatures of inspectors;
- F. Contact information for all subcontractors including email addresses; and
- G. A record of all submittals and dates of approvals.
- H. References are made throughout the Specifications and Drawings where additional record submittals are required.

2.2 PARK MAINTENANCE KIT

- A. At the completion of construction, the Contractor shall provide to the Town Department of Public Works, Parks Maintenance Division, a Maintenance Kit containing all touch-up paint, maintenance instructions, spare parts, and other maintenance materials provided by the manufacturers of all improvements.
- B. The Maintenance Kit shall be delivered in a single container clearly labeled with the Park Name, and each item shall be identified as to the source.

2.3 AS-BUILT DRAWINGS

- A. As-Built Drawings shall be a complete and accurate record that incorporate any and all changes to the construction plan set issued at the time of contract initiation. As-built drawings shall be clearly marked and annotated and shall include but not be limited to: all field changes, change orders, and supplemental drawings provided by the Landscape Architect.
- B. As-Built Drawings shall include complete records of all water, drainage, and electric utilities installed, including sizing, location, and inverts of all drainage pipes and structures, and sizing and location of all water service lines and electrical conduits.
- C. The Compact Discs shall include an electronic copy of all as-built drawings.

PART 3 - EXECUTION

3.1 SUBMISSIONS

- A. Submit all documents and data in a collated, manual format, with three (3) manuals to be submitted. Include a Table of Contents of the material for reference. The submittal is to be entire and complete, addressing all requirements listed above.

END OF SECTION

SECTION 02 01 00 MAINTENANCE OF EXISTING CONDITIONS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the work under this Section.

1.2 WORK INCLUDED

- A. The Contractor shall protect all existing utilities and improvements not designated for removal, and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than prior to such damage or temporary relocation, all in accordance with the Contract Documents and the original specifications for that work as installed under a prior Phase.

1.3 REFERENCES

- A. Examine all other Sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of other trades. Cooperate with all trades and all departments of the Town and coordinate all work under this Section therewith.
- B. The following related items are included under the Sections listed below:
 - 1. Section 01 57 00 – Environmental Protections;
 - 2. Section 02 41 00 – Site Preparation and Demolition;
 - 3. Section 31 31 19 – Invasive Vegetation Management;
 - 4. Section 32 10 00 – Bases, Ballasts, Paving, & Edging.

1.4 PROTECTION OF EXISTING UTILITIES

- A. The Contractor shall not destroy, remove, or otherwise disturb any existing utility infrastructure without proper authorization. Utilities disturbed by the Contractor shall be fully restored (including all surfaces above the utilities per the requirements outlined below) after work has been otherwise completed.
- B. The Contractor shall protect underground utilities and other improvements which may be impaired during construction operations, regardless of whether or not the Utilities are indicated on the Drawings. The Contractor shall take all possible precautions for the protection of unforeseen Utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.

1.5 PROTECTION OF HISTORIC STONE WALLS

- A. The existing stone foundation is a historic, dry-laid stone foundation and is subject to potential damage or instability. Similarly, the existing stone walls on site are dry-laid stone walls. The Contractor is advised to take all reasonable precautions to prevent any damage to or alteration of the stone walls and foundation.
- B. Staging, vehicular access, and equipment use over or adjacent to existing stone walls shall be avoided unless specifically authorized by the Owner and Landscape Architect.

- C. Where circulation near existing stone walls cannot be avoided, use of such areas shall be limited to the minimum extent practicable, and the ground and structures shall be thoroughly protected from damage and spills through the use of:
 - 1. Plywood or other materials suitable to the purpose as necessary;
 - 2. Equipment of the minimum size practicable to accomplish the purpose;
 - 3. Vigilant care to avoid trespass outside the boundaries of protection measures installed, and;
 - 4. Minimization of excessive, speedy, or abrupt movements of vehicles or equipment.
- D. Prior to commencing construction, the Contractor shall inform the Owner and Landscape Architect of their proposed approach for the work within the stone foundation, including their planned method of access for vegetation management and removals and for the addition of the crushed stone surfacing. The wall protection measures to be taken shall be detailed during the pre-construction meeting and submitted in writing and approved before beginning work adjacent to or within the foundation and walls.

1.6 PROTECTION OF EXISTING PLANTINGS AND LAWN

- A. The Contractor is hereby advised that the areas on the downhill side of the stone wall through the center of the site (approximately as indicated on the Drawings) have been heavily planted with perennial bulbs including but not limited to daffodils. No materials storage, staging, excavation, or other disturbance is permitted in these areas of the site to protect the underlying bulbs.
 - 1. Should the area be damaged, compacted, or disturbed, the Contractor shall be responsible for the replacement of bulbs and lawn to the satisfaction of the Owner and Landscape Architect.
- B. To the greatest extent feasible, the Contractor should minimize damage to and compaction of lawn areas outside those needed for the completion of the Work. The Contractor will be responsible for the restoration of all damaged or degraded lawn areas to the satisfaction of the Owner and the Landscape Architect, following all specifications for new lawns contained in 32 90 00.

1.7 PROTECTION OF PAVEMENTS

- A. All Paved areas (gravel, concrete, or bituminous concrete) within the adjacent rail trail right of way not indicated for removal, including curbing, shall be protected from damage due to construction, staging, or related activities. (Note: Specific protection of Rockland Road is not required beyond standard construction practices. Access is expected to primarily be off Rockland Rd.)
- B. Staging, vehicular access, and equipment use on existing pavements should be kept to the bare minimum feasible to facilitate construction.
- C. Where circulation over existing pavements cannot be avoided, use of such surfaces shall be limited to the minimum extent practicable, and the pavements shall be thoroughly protected from damage and spills through the use of:
 - 1. Plywood or other materials suitable to the purpose as necessary;
 - 2. Equipment of the minimum size practicable to accomplish the purpose;
 - 3. Vigilant care to avoid trespass outside the boundaries of protection measures installed, and;

4. Minimization of excessive, speedy, or abrupt movements of vehicles or equipment.

1.8 RESTORATION OF PAVEMENTS

- A. All pavements or curbing specified for protection under 1.7 above or elsewhere in the Construction Documents which are cut or damaged during construction shall be replaced with similar materials of equal thickness to match the existing adjacent undisturbed areas, except where specific resurfacing requirements have been called for elsewhere in these Contract Documents, or in the requirements of the agency issuing the permit.
- B. The pavement restoration requirement to match existing conditions shall apply to all components of existing sections, including base, sub-base, and pavement.
- C. Temporary and permanent pavement shall conform to the requirements of the affected pavement owner.
- D. In order to obtain a satisfactory junction with adjacent surfaces, the Contractor shall saw cut back and trim the edge so as to provide a clean, sound, vertical joint before replacement of an excavated or damaged portion of pavement.
- E. All pavement restoration and other facilities restoration shall be constructed to finish grades compatible with adjacent undisturbed pavement.

1.9 TREES OR SHRUBS WITHIN ADJACENT RIGHTS-OF-WAY AND PROJECT LIMITS

- A. Except where trees or shrubs or other plantings are indicated to be removed, the Contractor shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs or other plantings, including those lying within street or rail trail rights-of-way and project limits, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the jurisdictional agency or Owner. Existing trees and shrubs which are damaged during construction shall be trimmed or replaced by the Contractor or a certified tree company under permit from the jurisdictional agency and/or the Owner.

PART 2 - MATERIALS (NOT USED)

PART 3 - EXECUTION (NOT USED)

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SECTION 02 41 00
SITE PREPARATION AND DEMOLITION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions and general requirements of the Contract apply to the Work under this Section.
- B. The Contractor shall, prior to any removal of rubbish or debris from the site, furnish written evidence satisfactory to the Owner's Representative that he has an approved dumping location for debris and/or spoil from his removals and excavation activities.
- C. On-site cleaning of materials for the purpose of salvage on the site shall not be permitted.
- D. The Contractor shall secure all necessary permits from the Town of Maynard before starting this project.

1.2 WORK INCLUDED

- A. Provide all labor, equipment, implements and materials required to furnish, install, construct and perform all Site Preparation work complete, as shown on the Drawings and as specified herein.
- B. Work includes, but is not limited to the following:
 - 1. All site furnishings and / or amenities noted below and on the drawings for removal without re-use, shall be set aside for the Town of Maynard maintenance department or other parties as designated by the Town. The Town shall have the right of first refusal on all objects that will not be re-used for the proposed Park.
 - 2. Removal of existing posts, chains, and any other furnishings indicated, and any and all associated footings, etc., as designated on Drawings ;
 - 3. Removal of subgrade material and all organic material, including mulch, as required by the Construction Documents;
 - 4. Removal of tree(s), stump(s), shrub vegetation, topsoil, and areas to be grubbed, where indicated on the Drawings. Remove roots structures over 1/4-inch diameter within 5-feet of the stump or stump grind to 2-feet below proposed finish grade;
 - 5. Removal and disposal of indicated brush piles and other dead vegetation;
 - 6. Removal of invasive vegetation as indicated on the drawings and in Section 31 31 19;
 - 7. Removal of indicated sections of existing brick pavement/structure as indicated on the Drawings (stockpile bricks in good condition for reuse by Others);

8. Materials not indicated to be reused or protected, and not desired by the Town of Maynard Department of Public Works, shall be removed legally off-site. Provide for proper disposal of all removals off-site, including documentation of approved dumping location as described in 1.1.B;
9. Protect existing trees, walls, curbing, edges, catch basins, paving, utility poles, fences, and utilities not indicated to be removed on the Drawings;
10. Protect the public right-of-way from the entry of erosion and construction debris;
11. Any other necessary preparations for installation of improvements.

1.3 REFERENCES

- a. Examine all other Sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of the other trades. Cooperate with all trades and all departments of Town of Maynard and coordinate all work under this Section.
- B. The following related items are included under the Sections listed below
 1. Section 31 00 00 - Earthwork - Clearing, Excavation, Filling and Grading
 2. Section 31 13 00 - Tree Pruning
 3. Section 31 31 19 – Invasive Vegetation Management

1.4 LAWS, ORDINANCES, PERMITS AND FEES

- A. The Contractor shall:
 1. Give necessary notices, obtain all permits and pay all governmental fees and other costs in connection with this work, file all necessary plans, prepare documents and obtain all necessary approvals.
 2. Obtain all required certificates of inspection for this work and deliver it to the Landscape Architect before request for acceptance and final payment for the work.
 3. Include in the work, without extra cost to the Owner, any labor, materials, services, apparatus, drawings (in addition to contract drawings and documents) in order to comply with all applicable laws, ordinances, rules and regulations, whether or not shown on the drawing and/or specified. The disturbed areas shall be secured with chain link construction fence and fence shall be maintained at all times while site is under construction as per General Conditions Section 00 70 00 of the Specifications.
 4. Provide all safety controls during construction including temporary walkways, fencing, barricades, etc. at no additional cost to the Owner.
 5. Completely remove from the project area all demolished materials, except as designated for stockpiling for re-use, and dispose of all materials off the site. Disposal of the materials shall be done in such a manner that there shall be no accumulation of any demolished material which may, in the opinion of the

Owner's Representative, the Fire Department or any other public agency having jurisdiction, constitute a hazard.

6. Comply with all Federal, State, and Local Codes for all utility work.

1.5 DEFINITIONS

The following related items are included herein and shall mean:

1. S.S.H.B. - Standard Specifications for Highways and Bridges, the Commonwealth of Massachusetts, Department of Public Works, latest edition.
2. A.S.T.M. - American Society for Testing and Materials.
3. A.A.S.H.T.O. - American Association of State Highway and Transportation Officials.

1.6 SITE CONDITIONS

- A. The Contractor shall visit and accept the site as he finds it and shall inform himself of the character and the type of structures to be removed. The Owner assumes no responsibility for the condition of the site. Damage to the site (whether by reason of fire, theft, or other happenings) shall be at the risk of the Contractor from and after the date of Contract execution and no such damage or loss shall relieve the Contractor from any obligation under the Contract.
- B. Environmental Requirements: Contractor shall not work on or with soils when they are overly dry, wet, or frozen. Field Test: Form soil in palm of hand; if soil retains shape and crumbles upon touching, then it may be worked (if it will not retain its shape, it is too dry; if it does not crumble, it is too wet). Landscape Architect shall be final authority on condition of soil.

1.7 PROTECTION

- A. NO ACCESS to the Job Site shall be allowed on or through the abutting private properties. Access shall be along the public right-of-ways.
- B. All rules and regulations governing the respective utilities shall be observed in executing all work under this Section. All work shall be executed in such a manner as to prevent any damage to existing streets, curbs, paving, service utility lines and structures, drainage lines and structures, and adjoining property. Monuments and benchmarks shall be carefully maintained and, if disturbed or destroyed, replaced as directed.
- C. The Contractor shall assume full responsibility for damages caused by his Subcontractor's equipment and personnel to the existing grounds as well as adjoining private property. The Contractor shall obtain approval for subsurface construction from DIGSAFE (1-888-344-7233 / 1-888-DIG-SAFE) and all necessary parties and the Town of Maynard before proceeding within the Contract limits.
- D. The work of this Section shall be performed in such a manner as to cause no interference with access by the Subcontractors or other Contractors to all portions of the site as is necessary for the normal conduct of their work.

- E. The Contractor shall take adequate precautions to protect all walks, roads, streets, curbs, pavements, trees and planting, on or off the premises, and shall repair and replace or otherwise make good, as directed by the Owner's Representative, any damage so caused.
- F. Trees that are damaged during construction shall be removed by the Contractor at their expense if instructed to do so by the Landscape Architect, and the Contractor shall pay the Maynard Department of Planning and Development for each damaged and removed tree based on the following schedule:
 - 1. \$1,500. per tree for 2" through 6" caliper
 - 2. \$3,000. per tree for over 6", through 12" caliper
 - 3. \$6,000. per tree for over 12", through 18" caliper
 - 4. \$12,000. per tree for over 18" caliper.

1.8 SPECIAL PROTECTION FOR MAINTAINING STREETS AND PUBLIC WAYS

- A. Do not close or obstruct streets, or sidewalks within the public right-of-way, without a permit. Do not place or store material in streets, alleyways or sidewalks.
- B. Conduct operations with minimum interference to street.
- C. Furnish, erect and maintain fences, planking, bracing, shoring, sheathing, lights, barricades, warning signs, and guards as necessary for the protection of streets, sidewalks, and adjoining property.
- D. Completely remove all protection when the work is completed or when ordered in writing to do so by the Owner.

1.9 UTILITIES

- A. All work shall be performed in accordance with Federal, State and Local Codes.
- B. Discontinuance or Interruption - Before starting demolition, the Contractor shall be solely responsible for making all necessary arrangements and for performing any necessary work involved in connection with the discontinuance or interruption of all public and private utilities or services under the jurisdiction of the utility companies or corporations, and the Owner. These include gas, electricity, steam, refrigeration, low tension system, telephone, internet access, television, police signal, fire alarm, water, sanitary sewer, storm drainage, and without limiting the generality of the foregoing, including any system or systems which will be affected by the work to be performed under this Contract.
- C. Protection - Preserve in operating condition all active utilities including overhead any wires, traversing the project site, which are to remain. Should any damage occur to a utility which is to remain as a result, in the judgment of the Owner's Representative, of this operation, the Contractor shall at his own expense, repair all damage to any such utility to the satisfaction of the affected utility operator and the Owner.
- D. Cleaning of Catch Basins and Storm Water Line - Contractor shall clean the one existing catch basin in the park and the catch basin in the street that into which it

drains, as well as the storm water lines between the two, removing accumulated silt in the basin and the pipe in order to provide sufficiently positive and continuous drainage to existing system in the street.

PART 2 - PART 2 - NOT USED

PART 3 - EXECUTION

3.1 REMOVALS

- A. All holes and trenches resulting from removals shall be backfilled as appropriate with gravel borrow and compacted as specified in Section 31 00 00 - Earthwork - Excavation, Filling and Grading.
- B. Tree, stump, and shrub removal: In areas where the finish condition shall be lawn or planting bed, the existing stump shall be ground and roots over 1/4 inch in diameter within 5 feet of the stump shall be removed, all to a minimum of 24 inches below new finish grade. In areas where the finish condition shall be pavement, the stump and roots shall be completely removed.
- C. Tree Protection: All removals and earthwork within protected areas under existing trees shall be handwork only. See Sheet L1.0, Demolition Plan, for protection zones of existing trees to remain.

3.2 DUST CONTROL

- A. Wet down thoroughly all work during excavation to prevent spread of dust. Make all arrangements and pay for all water and necessary connections therefore.

3.3 CLEAN-UP

- A. Remove from the project site all materials and debris resulting from the work of excavation. Storage of such materials on the project site will not be permitted. The project site shall be safe, clean and holes filled and compacted with clean fill upon completion of the excavation and site clearance work.

END OF SECTION

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SECTION 03 30 00
CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions of the Contract apply to the work under this Section.
- B. All references to products by manufacturer, trade name or performance Specifications bearing the connotation "or Approved Equal" shall be as determined by the Landscape Architect and the Town, per MGL c. 30 s. 39M, part b, criteria 1.

1.2 WORK INCLUDED

- A. Provide all labor, equipment, implements and materials required to furnish, install, construct and perform Cast-In-Place Concrete Work as shown on the Drawings and as specified herein:
 - 1. Concrete for pads and for all footings for site furniture, fence, etc.
- B. Examine all other Sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of other trades. Cooperate with all trades and all departments of the Town of Maynard and coordinate all work under this Section therewith.
- C. The following related items are included under the Sections listed below.
 - 1. Section 02 41 00 - Site Preparation and Demolition
 - 2. Section 11 68 16 - Play Equipment
 - 3. Section 31 00 00 - Earthwork - Clearing, Excavation, Filling and Grading
 - 4. Section 32 10 00 - Bases, Ballasts, and Paving
 - 5. Section 32 30 00 - Site Improvements
 - 6. Section 32 33 00 - Site Furniture

1.3 SUBMITTALS

- A. All manufacturers' product literature.
- B. Test reports for concrete. Compression tests at 7 days, 14 days, and 28 days and slump test. One test set is to be done for every 10 cubic yards of concrete.

1.4 LAWS, ORDINANCES, PERMITS AND FEES

The Contractor shall:

- A. Give necessary notices, obtain all permits and pay all governmental taxes, fees and other costs in connection with this work, file all necessary plans, prepare documents and obtain all necessary approvals.
- B. Obtain all required certificates of inspection for this work and deliver same to the Landscape Architect before request for acceptance and final payment for the work.
- C. Include in the work, without extra cost to the Owner, any labor, materials, services, apparatus, drawings (in addition to contract drawings and documents) in order to comply with all applicable laws, ordinances, rules and regulations of the Town of

Maynard and the Commonwealth of Massachusetts, whether or not shown on the Drawings and/or specified.

1.5 DEFINITIONS

- A. The following related items are included herein and shall mean:
 - 1. S.S.H.B. - Standard Specifications for Highways and Bridges, the Commonwealth of Massachusetts, Department of Public Works, latest edition
 - 2. A.S.T.M. - American Society for Testing and Materials
 - 3. A.A.S.H.T.O. - American Association of State Highway and Transportation Officials

1.6 SUBSURFACE INFORMATION

- A. The Owner and Landscape Architect assume no responsibility for the Contractor's failure to make his own site investigation and makes no representation regarding the character of the soil or subsurface conditions which may be encountered during the performance of the work.

1.7 FINISHED GRADES

- A. The words "finished grades" as used herein mean the required final grade elevations indicated on the Drawings. Where not otherwise indicated, site areas shall be given uniform slopes between points, for which finished grades are shown, or between such points and existing grade except that vertical curves or roundings shall be provided at abrupt changes in slope.

1.8 GRADES AND ELEVATIONS

- A. The Drawings indicate, in general, the alignment and finished grade elevations. The Landscape Architect, however, may make such adjustments in grades and alignment as are found necessary in order to avoid interference and to adapt the grading to other special conditions encountered.

1.9 WORK IN THE PUBLIC WAYS

- A. Notify the appropriate municipal officials at least seven calendar days in advance of commencing any work in the public ways to obtain all required permission to perform this work. Perform all work in the public ways in a manner required by the municipal authorities.
- B. Should there be any conflict between requirements specified in the Contract Documents and those of the Town of Maynard, the municipal requirements shall govern.
- C. Do not close or obstruct any streets or sidewalks unless and until they have been discontinued by the appropriate municipal authority or unless and until he shall have first secured all necessary and required permits. No materials whatsoever shall be placed or stored in the streets. Conduct all operations to interfere as little as possible with the use ordinarily made of roads, driveways, sidewalks, or other facilities near enough to the work to be affected thereby.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Cast-in-place concrete shall be Class D, air-entrained concrete conforming to the requirements and applicable provisions of Section 701 of the S.S.H.B. Minimum 28-day compressive strength shall be 4,000 psi. Concrete shall be air-entrained 5% minimum with a two (2") inch minimum to four (4") inch maximum slump except as otherwise noted; see 2.8 for Slump limits for particular applications.

2.2 FORM MATERIALS

- A. Forms of Exposed Finished Concrete: Unless otherwise indicated, construct form work for exposed concrete surfaces with plywood, metal, metal-framed plywood faced or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces. Furnish in largest practical sizes to minimize number of joints and to conform to the joint system shown on Drawings. Provide form material with sufficient thickness to withstand pressure of newly placed concrete without bow or deflection.
 - 1. For plywood, use plywood complying with U.S. Product Standard PS-1 "B-B (Concrete Form) Plywood," Class I, Exterior Grade or better, mill-oiled and edge-sealed, with each piece bearing legible inspection trademark.
- B. Form for Unexposed Finish Concrete: Form concrete surfaces which will be unexposed in finish structure with plywood, lumber, metal or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.
- C. Form Coatings: Provide commercial formulation form-coating compounds that will not bond with, stain or adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.

2.3 REINFORCING MATERIALS

- A. Welded Wire Fabric (WWF): ASTM A185, welded steel wire fabric.
- B. Supports for Reinforcement: Provide supports for reinforcement including bolsters, spacers and other devices for spacing, supporting and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI recommendations, unless otherwise acceptable.

2.4 CEMENT

- A. Cement shall be Portland Cement Type 1, free from water-soluble salts or alkalis which will cause efflorescence on exposed surfaces. Portland Cement shall comply with Standard Specifications of the ASTM-C150 Type I or II. Use only one brand of cement throughout the project.
- B. Cement shall be stored in a weather-tight structure and in such a manner as to prevent deterioration or intrusion of foreign matter. It shall be easily accessible for proper inspection and identification of each shipment. Cement that has hardened or partially set shall not be used. Limit the temperature of the cement to 140 degrees Fahrenheit when delivered to the batching plant.

2.5 AGGREGATE

- A. Lightweight fine aggregate for all concrete shall consist of washed inert natural sand conforming to ASTM-C330.

- B. All other aggregates shall conform to ASTM C-33. Provide aggregates with a long history of successful use in similar work and conditions. Grade fine aggregates from 1/4" to fines. Grade coarse aggregates from 1/4" to size specified.

2.6 WATER

- A. Water for concrete shall be clean, potable, and free from deleterious substances.
- B. When subjected to the mortar strength test described in ASTM-C87 the strength at 28 days of mortar specimens made with the water under examination and normal Portland Cement shall be at least 100% of the strength of similar specimens made with distilled water.

2.7 RELATED MATERIALS

- A. Grout: Non-shrink, non-metallic grout meeting COE CRDC 621 (558). Provide one of the following (or approved equal): "Por-rok", "Five Star Grout" by U.S. Grout Company or "Masterflow 713" by Master Builders.
- B. Chemical Hardener (chHD-Fn): Colorless aqueous solution containing a blend of magnesium fluosilicate and zinc fluosilicate combined with a wetting agent, containing not less than 2 lbs. of fluosilicates per gal.
- C. Absorptive Cover: Burlap cloth made from jute or kenaf, weighing approximately 9 oz. per sq. yd., complying with AASHTO M 182, Class 2.
- D. Moisture-Retaining Cover: One of the following, complying with ASTM C171.
 - 1. Waterproof paper
 - 2. Polyethylene film.
 - 3. Polyethylene-coated burlap
- E. Filler strips for expansion joints where used with caulking or sealants shall be cork type, non-extruding, self-expanding filler strips, AASHTO M-153-111, ASTM D1752, III, as manufactured by Celotex Corporation, W.R. Meadows, Inc., W.R. Grace and Company, or Approved Equal. Where no sealant is required strips may be non-extruding bituminous type in accordance with ASTM D1751.
 - 1. Pre-molded filler shall be one piece for the full depth and width of the joint, leaving a sealant recess as indicated. Use of multiple pieces of lesser dimensions to make up required depth and width of joint will not be permitted.
- F. Admixtures
 - 1. Admixtures causing accelerated setting of the cement in concrete shall not be used.
 - 2. In general, all concrete shall not contain additives, but an admixture may be employed therein (to improve workability, durability, etc.) subject to prior test and/or approved by the Landscape Architect in writing.
 - 3. Water-reducing and air-entraining agents shall be used in concrete, as required by the Landscape Architect, in strict accordance with the manufacturer's printed instructions. Agents shall be stored safe from adverse temperature in accordance with manufacturer's printed instructions. Total air entrained in freshly mixed concrete shall be 5.0% plus or minus 1.0% of volume of concrete with required strengths maintained.
 - 4. Water-reducing agent: "Sonotard WR" by Sonneborn Building Products, "WRDA" by W.R. Grace Company, "Pozzolith 100" by Master Builders

Company, or Approved Equal conforming to ASTM C-494. Water reducing agent must be by same manufacturer as air-entraining agent.

5. Air-entraining Agent: "Darex" by W.R. Grace Company, "Aerolith" by Sonneborn Building Products, "MB-VR" by Master Builders Company, "Sealtight Air Entraining Agent" by W.R. Meadows, or Approved Equal conforming to ASTM C-260.
6. No other admixtures may be used without Landscape Architect's approval.

2.8 SLUMP LIMITS:

- A. Proportion and design mixes to result in concrete slump at point of placement as follows:
 1. Ramps and sloping surfaces: Not more than 3".
 2. Reinforcing wall systems: Not less than 1" and not more than 3".
 3. Other concrete: Not less than 2" and not more than 4" except as otherwise noted.

2.9 CURING COMPOUNDS

- A. All curing compounds shall conform to requirements of ASTM Designation C-309, Type I, clear and C-156. No materials containing wax or saponifiable materials will be permitted.
- B. Curing compound in areas that will be exposed to view in the finished work, or to receive a painted finish, and areas to receive a concrete topping, synthetic athletic surfacing, mortar beds, or other similar finishes, shall contain a fugitive dye, and shall be of a type that will become brittle and easily removable after approximately 21 days to allow dust-proofing treatment.
- C. Curing compound shall be Master Builders "Master Seal", Symons "Cure and Seal", Sonneborn "Kure-N-Seal", "CS-309" by W.R. Meadows or Approved Equal, conforming to ASTM 309, Type 1 and 2.

2.10 PROPORTIONING AND DESIGN OF MIXES

- A. Prepare design mixes for each type and strength of concrete by either laboratory trial batch or field experience methods as specified in ACI 301. If trial batch method used, use an independent testing facility acceptable to Landscape Architect for preparing and reporting proposed mix designs. The testing facility shall not be the same as used for field quality control testing unless otherwise acceptable to Landscape Architect.
- B. Submit written reports to Landscape Architect of each proposed mix for each class of concrete at least 15 days prior to start of work. Do not begin concrete production until mixes have been reviewed and approved by the Landscape Architect.
- C. Adjustments to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant; at no additional cost to Owner and as accepted by Landscape Architect. Laboratory test data for revised mix design and strength results must be submitted to and accepted by Landscape Architect before using in work.

2.11 CONCRETE MIX

- A. Job-Site Mixing: Mix materials for concrete in appropriate drum type batch machine mixer. For mixers of one cu. yd., or smaller capacity, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released. For mixers of capacity larger than one cu. yd., increase minimum 1-1/2 minutes of mixing time by 15 seconds for each additional cu. yd. or fraction thereof.
- B. Provide batch ticket for each batch discharged and use in work indicating project identification name and number, date, mix type, mix time, quantity, and amount of water introduced.
- C. Ready-Mix Concrete: Comply with requirements of ASTM C94, and as herein specified.
- D. Addition of water to the batch will not be permitted.
- E. During hot weather, or under conditions contributing to rapid setting of concrete, a shorter mixing time than specified in ASTM C94 may be required.
- F. When air temperature is between 85 Deg. F (30 deg. C) and 90 Deg. F (32 deg. C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air temperature is above 90 Deg. F. (32 deg. C), reduce mixing and delivery time to 60 minutes.
- G. Refer to Section 32 10 00, Part 2, 2.3 A for color admixture for paving and pads.

PART 3 - EXECUTION

3.1 FORMWORK

- A. Forms shall conform to the lines, dimensions and shapes of concrete shown providing for openings, recesses, keys, slots, beam pockets and projections as required.
- B. Make forms clean and free of foreign material before placing concrete.
- C. Do not use earth cuts as forms for vertical surfaces, unless approved by the Landscape Architect.
- D. Design of Formwork
 - 1. Comply with ACI 301, Chapter 4, Paragraph 4.2. Formwork drawings shall bear the seal of licensed professional engineer.
 - 2. Form rods and tie wires of exterior surfaces shall slope down from the inside to outside of forms.
 - 3. Provide forms so that no discernible imperfection is in evidence in finished concrete surfaces due to deformation, bulging, jointing, or leakage of forms.

3.2 MIXING CONCRETE

- A. Ready Mix Concrete
 - 1. Comply with ASTM C94.
 - 2. Add mixing water only at the site.
 - 3. Discharge the concrete completely at the site within 1-1/2 hours after the introduction of the cement to the aggregates. In hot weather reduce this time

limit so that no stiffening of the concrete shall occur until after it has been placed.

4. Begin the mixing operation within thirty minutes after the cement has been intermingled with the aggregates.

B. Batch Mixing at Site

1. Comply with ACI 301, Chapter 7, Paragraph 7.2.
2. Excessive mixing requiring the addition of water to preserve the required consistency will not be permitted. Mix concrete to a consistency which can be readily placed without segregation.
3. Where admixtures are specified, equip mixers with a device for measuring and dispensing the admixture.

- C. Hand-Mixed Concrete: When hand-mixed concrete is allowed and approved for certain parts of the work, mix on watertight platforms. Proportion cement, sand and aggregate loose by volume, carefully measured. Thoroughly mix sand and cement together dry until the mixture is a uniform color. Add the aggregate and turn the mass over until the mixture is uniform and homogeneous. Add water by sprinkling and turn the mass over until it is uniformly mixed and of the required consistency.

3.3 PLACING CONCRETE

- A. Preparation Before Placing: Conform to ACI 310, Chapter 8, Paragraph 8.1.

B. Conveying

1. Comply with ACI 301, Chapter 8, Paragraph 8.2.
2. Provide a spout or downpipe and elephant trunk or other appropriate method to prevent concrete from falling freely through a height greater than 3 feet.

- C. Depositing: Comply with ACI 301, Chapter 8, Paragraph 8.3.

3.4 CURING

- A. Comply with ACI 301, Chapter 12. Moist cure (continuous free water and cover with burlap) for first five (5) days after casting. Protect against temperatures under 40 deg. F. in first five days.

3.5 FORM REMOVAL

- A. Do not remove forms until the concrete has thoroughly hardened and has attained sufficient strength to support its own weight and construction live loads to be placed thereon, without damage to the structure. In general, do not disturb forms for framing until the concrete has attained at least 40% of design strength for side forms and 80% of design strength for bottom forms. Remove no forms for 24 hours after placing concrete. Protect concrete from pedestrian traffic for a period of 3 days after placing. Damp cure as per standards above. Be responsible for proper form removal and replace any work damage due to inadequate maintenance or improper or premature form removal.
- B. Where use of metal form ties extending to within less than 1-1/2 in. of the face of permanently exposed concrete has been unavoidable, cut off such ties at least 1-1/2 in. deep in the concrete but not less than 72 hours after concrete has been cast. Remove forms by methods which will not spall the concrete or cause any injury whatsoever. Hammering or prying against concrete will not be permitted.

3.6 FINISHING

A. General Requirements for Flatwork:

1. Strike off top surfaces of finished fill and monolithic slabs true and level within a tolerance of 1/8 in. in 10 ft. and measured with a 10 ft. straightedge placed in any direction at any location.
2. Set edge forms and intermediate screed strips accurately and sufficiently rigid to support screeds and so that proper surface elevations and concrete thickness are achieved allowing for dead load deflection and camber of formwork. Take measurements and control tolerances by the use of transit instrument.
3. Upon completion of leveling, remove screed and fill spaces with concrete.
4. Concrete shall have a medium broom finish of parallel marks. Brooming shall be at right angles to the axis of walk or as shown on the Drawings.
5. Joints and edges shall be tooled or otherwise finished as shown on the Drawings.

3.7 FIELD QUALITY CONTROL

- A. Sampling and testing for quality control during placement of concrete may include the following, as directed by the Landscape Architect.
- B. Sampling Fresh Concrete: ASTM C172, except modified for slump to comply with ASTM C94.
- C. Slump: ASTM C143, one test for each concrete load at point of discharge; and one test for each set of compressive strength test specimens.
- D. Air Content: ASTM C173, volumetric method for lightweight or normal weight concrete; one for each set of compressive strength test specimens.
- E. Concrete Temperature: Test hourly when air temperature is 40 deg. F (4 deg. C) and below, and when 80 deg. F (27 deg. C) and above; and each time a set of compression test specimens made.
- F. Compression Test Specimen: ASTM C31; one set of 6 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory cured test specimens except when field-cure test specimens are required.
- G. Compressive Strength Tests: ASTM C39; one set for each 100 cu. yds. or fraction thereof, of each concrete class placed in any one day or for each 5,000 sq. ft. of surface area placed; 1 specimen tested at 7 days, 2 specimens tested at 28 days, and one specimen retained in reserve for later testing if required.
- H. When total quantity of a given class of concrete is less than 50 cu. yds., strength test may be waived by Landscape Architect if, in his/her judgment, adequate evidence of satisfactory strength is provided.
- I. When strength of field-cured cylinders is less than 85% of companion laboratory-cured cylinders, evaluate current operations and provide corrective procedures for protecting and curing the in-place concrete.
- J. Strength level of concrete will be considered satisfactory if average of sets of three consecutive strength test results equal or exceed specified compressive strength, and no individual strength test result falls below specified compressive by more than 500 psi.

- K. Test results will be reported in writing to Landscape Architect and Contractor on same day that tests are made. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials; compressive breaking strength and type of break for both 7-day tests and 28-day test.
- L. Additional Tests: The testing service will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure, as directed by Landscape Architect. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42, or by other methods as directed. Contractor shall pay for such tests conducted, and any other additional testing as may be required, when unacceptable concrete is verified.

3.8 PROTECTION OF CONCRETE

- A. Under no circumstances shall the Contractor pour and leave the fresh concrete open to vandalism, while it is setting up. Damaged concrete shall be subject to rejection by the Owner or Landscape Architect and shall be replaced by the Contractor at no additional charge to the Owner. If concrete is rejected, new concrete will be poured at no additional expense to the Owner.

END OF SECTION

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SECTION 10 14 00 PROJECT SIGNAGE

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the work under this Section.

1.2 SCOPE OF WORK

- A. Provide all materials, labor, mountings and incidentals for:
 - 1. One (1) temporary construction project information sign, four feet by eight feet (4' x 8'), installed in a location directed by the Owners Representative;
- B. Examine all other Sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of other trades. Cooperate with all trades and all departments of the Town of Maynard and coordinate all work under this Section therewith.

PART 2 - MATERIALS

2.1 GENERAL

- A. All signs shall be professionally lettered/printed. The Town will provide the vendor with electronic images of all signage artwork, but it shall be the responsibility of the vendor to convert those images to the proper electronic format. The Vendor shall provide final proofs of all signs to the Town for approval before manufacture.
- B. Signage artwork and text may be vinyl or silk screened. If vinyl is used, the artwork and text shall have a non-yellowing, UV-resistant, urethane clear coat applied to protect the vinyl and provide a graffiti resistant coating. Vendor shall provide color samples and paint color and product specifications to the Town upon request.
- C. All signs shall have rounded corners.

2.2 TEMPORARY CONSTRUCTION INFORMATION SIGN

- A. Sign shall be made of durable, exterior 3/4" marine grade plywood or 1/4" metal, securely mounted to wood posts or attached to existing fencing, as directed by the Owner's Representative. Sign shall be professionally lettered. Wording and layout to be supplied by the Owner. Submit samples of color and a Shop Drawing indicating lettering layouts to Engineer for approval. Electronic file with sign layout to be provided to Contractor and Owner's representative by the Landscape Architect.
 - 1. Sign shall be a project sign and will include a colored illustrative drawing of the final layout as well as the Town Seal and other pertinent information to be provided by the Owner's Representative. Sign shall be 4'-0" tall by 8'-0" wide.
 - 2. Shop Drawings Required.
- B. Sign shall be securely mounted to 4"x4" min. wood posts with galvanized metal attachments and shall be framed so as to be durable. All attachments and mountings shall be child safe and vandal resistant.

PART 3 - EXECUTION

3.1 PLACEMENT

- A. Temporary Sign shall be installed facing the adjacent rail trail or access point to the construction area so as to be visible and inform the general public. Where possible, the sign should be located so as not to conflict with the construction activity nor to require moving during the construction process.

END OF SECTION

SECTION 31 00 00 EARTHWORK

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions of the Contract, Division 0, and applicable parts of Division 1 apply to the Work under this Section.
- B. The Contractor shall prior to any removal of surplus fill, excavated material, or debris from the site, furnish written evidence satisfactory to the Owner or Owner's representative that he has an approved dumping location for debris and/or spoil from his/her excavation activities.
- C. For all earthwork, excavation, and removals within the driplines of protected trees (not limited to areas within designated tree protection fencing), the Owner's Representative or Landscape Architect must be present on the site or have specifically waived that obligation in writing to the Contractor to ensure tree protection measures are being observed. Provide 48 hours' notice prior to commencement of all such work. (SEE 01 57 00 3.07)

1.2 WORK INCLUDED

- A. Provide all labor, equipment, implements and materials required to furnish, install, construct and perform Earthwork as shown on the Drawings and as specified herein.
- B. To be included:
 - 1. Excavating, filling, trenching and backfilling of all descriptions required for the construction of pavements, safety surfaces, equipment, site improvements, utilities, filling voids left by hardscape and plant removals, and all specialties. Provide all additional fill materials as required and specified herein.
 - a. All work within the protected areas under existing trees including demolition and removal (see Sheet L1.0 & L1.1 of the Drawings), shall be **HAND WORK** or **AIR SPADE ONLY** to protect the root structures of existing trees. See also Specifications section 01 57 00 3.7.
 - 2. Pumping and/or bailing necessary to maintain excavated spaces free from water from any source whatsoever.
 - 3. Provide graded materials, as specified, for fills, base courses and backfills as required.
 - 4. Perform all compaction of fill materials as hereinafter specified.
 - 5. Obtain all required permits, licenses and approvals of appropriate municipal and utility authorities prior to commencing work, and pay all costs incurred there from.
 - 6. If subgrade is deemed unsuitable for placement of subbase material, backfill with processed gravel. Work under this Section shall include the excavation of TEN (10) cubic yards of unsuitable material beyond the line and grades as shown on drawings, and as determined by the Landscape Architect. Such removals shall be measured by a Civil Engineer or Land Surveyor employed by the Contractor and verified by the Landscape Architect. If this work is not performed, credit to the extent of unsuitable material removal less than

TEN (10) cubic yards in total quantity shall be applied to the contract price at a value of \$45.00 per cubic yard. The contract price shall be reduced by the extent of the work not undertaken as called for in this Section. The contract price shall be increased, if additional work is authorized by the Landscape Architect, at a value of \$50.00 per cubic yard.

- a. Unsuitable material shall be measured in place by a Civil Engineer employed by the Contractor with quantities verified by the Landscape Architect. No unsuitable material removals shall be credited to the Contractor without prior measurements and verifications.
 - b. For unsuitable material amounts greater five (5) cubic yards, the unsuitable material shall be measured in place by a Civil Engineer employed by the Contractor with quantities verified by the Landscape Architect. No unsuitable material removals shall be credited to the Contractor without prior measurements and verifications.
7. Work under this Section shall include the removal and backfill of TEN (10) cubic yards of ledge in mass or trench and open rock excavations, or boulder over one (1) cubic yard in size in trench excavations or removal of solid masonry or concrete foundations. Such removals shall be measured by a Civil Engineer or Land Surveyor employed by the Contractor and verified by the Landscape Architect. If this work is not performed, credit to the extent of ledge or boulder or concrete footing removal less than TEN (10) cubic yards in total quantity shall be applied to the contract price at a value of \$75.00 per cubic yard. The contract price shall be reduced by the extent of the work not undertaken as called for in this Section. The contract price shall be increased, if additional work is authorized by the Landscape Architect, at a value of \$90.00 per cubic yard.
- a. Rock excavation shall be measured in place by a Civil Engineer employed by the Contractor with quantities verified by the Landscape Architect. No rock removals shall be credited to the Contractor without prior measurements and verifications or without the express approval to continue with removals of the Landscape Architect and Owner.
- C. Examine all other Sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of other trades. Cooperate with all trades and all departments of the Town of Maynard and coordinate all work under this Section therewith.
- D. The following related items are included under the Sections listed below.
1. Section 02 41 00 - Site Preparation and Demolition
 2. Section 03 30 00 - Cast In Place Concrete
 3. Section 12 93 00 - Site Furnishings
 4. Section 32 10 00 - Bases, Ballasts, and Paving
 5. Section 32 92 00 – Planting
 6. Section 33 00 00 – Utilities

1.3 SUBMITTALS

- A. Submit certified gradation test data for all earth/stone materials a minimum of one week prior to delivery to the site.

1. Provide 50-pound samples of each borrow material to a qualified laboratory for moisture density testing a minimum of one week prior to delivery to site.
- B. Compaction test of subbase materials after installation and compaction.

1.4 LAWS, ORDINANCES, PERMITS AND FEES

The Contractor shall:

- A. Give necessary notices, obtain all permits and pay all governmental taxes, fees and other costs in connection with this work, file all necessary plans, prepare documents and obtain all necessary approvals.
- B. Obtain all required certificates of inspection for this work and deliver same to the Landscape Architect before request for acceptance and final payment for the work.
- C. Include in the work, without extra cost to the Owner, any labor, materials, services, apparatus, drawings (in addition to contract drawings and documents) in order to comply with all applicable laws, ordinances, rules and regulations of the Town of Maynard the Commonwealth of Massachusetts, whether or not shown on the Drawings and/or specified.
- D. The Contractor shall provide a temporary sidewalk or suitable detour route whenever a sidewalk is closed because of the construction. A temporary sidewalk must be at the same level as the existing closed sidewalk and must be visually partitioned off from the street and work area. The Contractor shall so conduct his operations as to interfere as little as possible with roads, driveways, alleys, sidewalks, or other nearby facility.

1.5 DEFINITIONS

- A. The following related items are included herein and shall mean:
 1. S.S.H.B. - Standard Specifications for Highways and Bridges, the Commonwealth of Massachusetts, Department of Public Works, latest edition
 2. A.S.T.M. - American Society for Testing and Materials
 3. A.A.S.H.T.O. - American Association of State Highway and Transportation Officials
- B. Rock excavation shall be defined as:
 1. Open rock excavation shall be classified as rock 3 cubic yards in size or larger.
 2. Trench rock excavation shall be classified as rock 1 cubic yard or larger.
 3. Ledge shall be classified as solid, continuous rock mass, unable to be removed without mechanical measures, and larger than the size/location conditions stated in paragraphs 1 and 2 above.

1.6 BENCH MARKS AND ENGINEERING

- A. Lines and grade work in accordance with Drawings and Specifications shall be laid out by a registered Civil Engineer or registered Surveyor employed by the Contractor. The Contractor shall establish permanent bench marks, to which access can easily be had during the progress of the work. The Contractor shall maintain all established bounds and bench marks and replace, as directed, any which may be

disturbed or destroyed. The selection of the registered Civil Engineer or Surveyor shall be approved by the Landscape Architect.

- B. The Contractor shall submit written confirmation of dimensions and elevations on the ground and report any discrepancies immediately to the Landscape Architect. Such confirmation shall bear the Engineer's registration stamp. Any discrepancies not reported prior to construction shall not be the basis of claims for extra compensation.
- C. The General Contractor shall not commence any excavation or construction work, until the Landscape Architect's verification has been received and approved by the Owner.

1.7 SUBSURFACE INFORMATION

- A. The Owner assumes no responsibility for the Contractor's failure to make his own site investigation and makes no representation regarding the character of the soil or subsurface conditions which may be encountered during the performance of the work.
- B. Attention is specifically directed to the preliminary information contained in Appendix A, Soil Boring Logs and Summary Plan

1.8 FINISHED GRADES

- A. The words "finished grades" as used herein mean the required final grade elevations indicated on the Drawings. Where not otherwise indicated, site areas shall be given uniform slopes between points, for which finished grades are shown, or between such points and existing grade except that vertical curves or roundings shall be provided at abrupt changes in slope.

1.9 GRADES AND ELEVATIONS

- A. The Drawings indicate, in general, the alignment and finished grade elevations. The Landscape Architect, however, may make such adjustments in grades and alignment as are found necessary in order to avoid interference and to adapt the grading to other special conditions encountered.

1.10 WORK IN THE PUBLIC WAYS

- A. Notify the appropriate municipal officials at least seven calendar days in advance of commencing any work in the public ways to obtain all required permission to perform this work. Perform all work in the public ways in a manner required by the municipal authorities.
- B. Should there be any conflict between requirements specified in the Contract Documents and those of the Town of Maynard, the municipal requirements shall govern.
- C. Do not close or obstruct any streets or sidewalks unless and until they have been discontinued by the appropriate municipal authority or unless and until he shall have first secured all necessary or other permits therefor. No materials whatsoever shall be placed or stored in the streets. Conduct all operations to interfere as little as possible with the use ordinarily made of roads, driveways, sidewalks, or other facilities near enough to the work to be affected thereby.

1.11 DISPOSITION OF EXISTING UTILITIES

- A. Active utilities existing on the site shall be carefully protected from damage and relocated or removed as required by the work. When an active utility line is exposed during construction, its location and elevation shall be plotted on the Record Drawings and both the Landscape Architect and the Utility Owner notified in writing.
- B. Inactive or abandoned utilities encountered during construction operations shall be removed, plugged or capped in accordance with procedures of relative utility company or agency. The location of such utilities shall be noted on the Record Drawings and reported in writing to the Landscape Architect.
- C. Active utility lines damaged in the course of construction operations shall be repaired or replaced as determined by the Landscape Architect without additional cost to the Owner.
- D. Notify the Owner at least three (3) days in advance of the proposed time for shutting down or interrupting utilities or services which may affect operation of adjoining properties. Unless otherwise authorized by the Owner, schedule such interruptions on weekends, holidays, or before or after Owner's normal working day. In no case shall any services or utilities be interrupted prior to notification and authorization by the Owner.

1.12 PROTECTION

- A. All rules and regulations governing the respective utilities shall be observed in executing all work under this Section. All work shall be executed in such a manner as to prevent any damage to existing streets, curbs, paving, service utility lines, walls, fences, structures and adjoining property. Monuments and bench marks shall be carefully maintained and, if disturbed or destroyed, replaced as directed.
- B. The Contractor shall perform the installation, maintenance and removal of all sheet piling, shoring and bracing required for the protection of all items of this Contract affected by the work of this Section.
- C. The Contractor shall furnish all facilities and materials necessary to prevent the earth at the bottom of excavation from becoming frozen or unsuitable to receive footing or other load bearing units.
- D. The work of this Section shall be performed in such a manner as to cause no interference with access by the Subcontractors or other Contractors to all portions of the site as is necessary for the normal conduct of their work.
- E. Protect all areas to remain undeveloped outside the Contract limit lines. Should these areas be damaged, the Contractor shall restore them to the satisfaction of the Landscape Architect and Owner. This includes the repairing and replacement of all damaged conditions such as plant materials and similar items.

PART 2 - PRODUCTS

2.1 GENERAL NOTES

- A. All fill to bring site to subgrade to be as defined below, used as called out on the Drawings and elsewhere in these Specifications.

2.2 SAMPLES AND TESTING:

- A. All fill material and its placement shall be subject to quality control testing. Contractor will submit the name of a qualified laboratory to perform test on materials, for Approval by Landscape Architect. The Contractor will pay for all costs of testing. Test results and laboratory recommendations shall be available to the Landscape Architect. Submit one test for each material source proposed for use.
- B. Provide samples of each fill material from the proposed source of supply. Allow sufficient time for testing and evaluation of results before material is needed. Submit samples from alternate source if required.
- C. The Landscape Architect will be sole and final judge of suitability of all material.
- D. The laboratory will determine maximum dry density and optimum water content in accordance with ASTM D1557, Method D and the in-place density in accordance with ASTM D1556.
- E. Test of material as delivered may be requested by Owner. Materials in question may not be used, pending test results. Tests of compacted material will be made per 3.6. Remove rejected materials and replace with new, whether in stockpiles or in place.
- F. Cooperate with laboratory in obtaining field samples of in-place materials after compaction. Furnish incidental field labor in connection with these tests.

2.3 ORDINARY BORROW

- A. Ordinary Borrow shall have the physical characteristics of soils designated as group A-1, A-2-4, or A-3 under AASHTO-M145.
- B. It shall be free of organic and compressible materials and stones larger than six inches maximum dimension.
- C. It shall have a maximum dry density of one hundred pounds per cubic foot.

2.4 STRUCTURAL FILL (PROCESSED GRAVEL/DENSE-GRADED GRAVEL):

- A. All paving shall be installed over compacted structural fill (either dense graded crushed stone or dense graded gravel); all voids left from removal of existing equipment, furnishings, or footings shall be filled with compacted structural fill.
- B. All Processed Gravel shall meet the specifications of M1.03.1 "Processed Gravel for Subbase" in S.S.H.B. Submit sample and test results to Contracting Officer for approval.

2.5 STRUCTURAL FILL (DENSE GRADED CRUSHED STONE):

- A. All Dense Graded Crushed Stone shall meet the specifications of M2.01.7 "Dense-graded Crushed Stone for Sub-base" in S.S.H.B. Submit sample and test results to Contracting Officer for approval.

2.6 DRAINAGE STONE (CRUSHED STONE):

- A. Drainage stone, or crushed stone, shall be 3/4" (except where other size indicated on the Drawings) clean, angular stone of a hardness suitable for use in structural applications. 3/4" stone shall comply with M2.01.4 and 1 1/2" shall comply with M2.01.1&2 in S.S.H.B. Crushed stone shall comply with M2.01.0 and M2.02.4 of the S.S.H.B.

PART 3 - EXECUTION

3.1 GRADES AND ELEVATIONS

- A. Establish the lines and grades in conformity with the Drawings. Establish and maintain suitable stakes or batters at points where spot elevations are given on the Drawings and at any other points to be graded as directed by the Landscape Architect. Maintain sufficient reference points at all times during construction to properly perform the Contract installation.

3.2 EXCAVATION

- A. General
 - 1. Excavate all material to the elevations, dimensions and form as shown on the Drawings and as specified for the construction of site improvements and other structures necessary for the completion of the utilities and site work. All unsuitable materials within the indicated and specified limits shall be excavated and removed at no additional cost to the contract as specified in 1.02 (B-6) of this section. Any quantities involving an extra or other adjustment of the Contract Price shall be subject to measurement verification and approval by the Landscape Architect prior to the excavation and removal of such materials. Unsuitable materials shall include the following:
 - a. Utility structures, building foundations and other man-made structures.
 - b. Peat, organic silt and other organic materials subject to decomposition, consolidation or decay.
 - c. Miscellaneous fill including cinders, ash, glass, wood, and metal.
 - d. Ledge or boulders except as specified for fills herein.
 - 2. In general, the General Contractor shall be permitted to use machine excavation except for the final six (6) inches under footings, foundations, utility lines and structure, which shall be hand work. Also, all excavation in the planting areas and areas specified for tree protection shall be hand work.
 - 3. If any part of the excavation is carried through error beyond the depth and dimensions indicated on the Drawings or specified herein, or if the foundation soils are disturbed by dewatering or other construction operation, the General Contractor shall, at his own expense, refill with structural fill compacted to ninety-five (95) percent of the maximum dry density at optimum moisture content or with concrete as determined by the Engineer.
 - 4. When excavation has reached the prescribed depth, the Landscape Architect shall be notified and will make an inspection of the condition and approve the placing of fill material.
 - 5. The Contractor shall obtain from the proper authorities locations of all utilities within the scope of this work so that there will be no damage done to such utilities. Neither the Owner nor the Landscape Architect will be responsible for any such damage, and the Contractor shall restore any structure or utility so damaged without additional compensation. Attention is called to that fact that there are electric lines, and other utilities in certain locations within and adjacent to the site. Written notifications to the appropriate utility agencies shall be made at least ten (10) days prior to the commencement of any work.

6. Wherever culverts, sewers, drains, manholes, catch basins, catch basin connections, water mains, valve chambers, utility tunnels, gas pipes, electric and telephone conduits, house service connections of any other underground constructions are encountered in excavating for utilities or any other site work, they shall be protected and firmly supported by the Contractor, at his own expense, until the trench is backfilled and the existing structures are made secure. Injury to any such structures caused by or resulting from the Contractor's operations shall be repaired at the Contractor's expense. The authority having charge of any particular underground structure shall be notified promptly of injury to its structure. All utility lines shall be noted on the required "As-Built" Plan.
 7. Excess material - Suitable excavation material which is allowable for fill and backfill shall be separately stockpiled as directed by the Landscape Architect. All surplus fill other than that required to complete the intent of the Contract shall become the property of the Contractor and shall be legally disposed of off the property by the General Contractor. All excavated materials which, in the opinion of the Landscape Architect are not suitable for fill and backfill shall be removed and legally disposed of off the property.
 8. Any unsanitary conditions encountered, such as broken sewer mains or uncovered garbage, shall be corrected or completely removed as directed by the Landscape Architect.
- B. Excavation for Site Improvements.
1. Excavate to the lines and grades shown on the Drawings and as specified to obtain the subgrades for the site improvements.
 2. Trenching for all water, utility, and drain lines shall comply with the standards in S.S.H.B., especially Section 150.64.
 3. Existing service and utilities encountered shall be immediately repaired, protected and maintained in use until relocation of same has been completed or to be cut and capped where directed or be prepared for connection when so required.

3.3 SUBGRADE PREPARATION AND PROTECTION

A. General Requirements

1. All subgrade areas shall be made ready for fill by removal of all organic material, unsuitable soils and deleterious materials to firm natural ground as directed by the Landscape Architect.
2. Scarify, spot-fill, or otherwise treat the surface of areas to receive fill as necessary to remove holes, depressions, ruts, hummocks, or other uneven features.

B. Proof Rolling Subgrades

1. Prior to placement of fill, or bottom filter fabric where shown on drawings, proof roll natural ground by making a minimum of two passes with approved compaction equipment. Proof rolling may be waived by the Landscape Architect where excessively wet or saturated subgrade conditions are encountered.

3.4 PROTECTION

- A. Protect open excavations with fencing, warning lights and other suitable safeguards. No open excavation shall be left without proper barriers and other devices necessary for public safety.
- B. Comply with local safety regulations or, in the absence thereof, with the provisions of the Manual of Accident Prevention in Construction of the Associated General Contractors of America, Inc. and O.S.H.A.
- C. Frost Protection - Make no excavation to the full depth indicated when freezing temperature may be expected unless the footing or slabs can be poured immediately after the excavation has been completed. Protect the bottoms as excavated from frost, if placing of concrete is delayed, with straw, tarpaulins or temporary heat until footings or slabs poured and backfill is placed.
- D. Any ditching required to keep the site free from water during construction is the responsibility of the Contractor.

3.5 PULVERIZING OF EXISTING ASPHALTIC PAVEMENT FOR REUSE

- A. Pulverizing equipment used for reclamation and reuse of existing asphaltic concrete pavement for use as pavement base material shall be capable of processing and pulverizing existing asphaltic concrete to a uniformly graded aggregate free from large pieces of unpulverized pavement.
- B. The Company performing the pulverization work shall have a minimum two year documented experience in equivalent work.
- C. Execute removal and pulverization for the full depth of the existing asphaltic concrete.
- D. Exercise care to limit pulverization to the existing asphaltic concrete and stone base course without contaminating pulverized mix with extraneous subbase material.

3.6 FILL AND COMPACTION

- A. Samples and Testing – See Part 2.2 above (Samples and Testing).
- B. Compaction Equipment and Tests
 - 1. Compaction equipment, unless otherwise specified, shall consist of heavy vibratory rollers, such as a Raygo 400 or other compaction equipment approved by the Landscape Architect. Equipment shall make a minimum of four (4) passes to achieve compaction as specified; to provide an evenly dense and compacted thickness throughout. All ruts shall be filled, the surface even and compacted to the density called for. The Landscape Architect retains the right to disapprove the use of any equipment that does not meet the above Specifications or perform the work as intended. Any modifications of equipment or method must be approved by the Landscape Architect.
 - 2. All fill material shall be compacted to at least ninety-five (95) percent of maximum density(s) determined by A.S.T.M. Test Designation D-1557, Method D or A.S.T.M. D-1556.
 - 3. Compaction tests shall be performed at fifteen (15) locations, to be selected in the field after material is in place and before installation of finishes, as directed by the Landscape Architect.

C. Placing Fills and Compacting

1. Fill material shall be placed in horizontal layers not exceeding six (6) inches. Each layer shall be compacted to the percentage of maximum dry density specified for the particular type of fill and at a water content equal to optimum dry density and optimum water content shall be as specified herein.
2. Where water content of the fill must be adjusted to meet this Specification, the fill shall be thoroughly disked to insure uniform distribution of any water added.
3. Areas to be filled or backfilled shall be free of construction debris, refuse, compressible or decayable materials and standing water. Do not place fill when materials or layers below it are frozen.
4. Notify the Landscape Architect when excavation is ready for inspection. Filling and backfilling shall not be started until conditions have been approved by the Landscape Architect.
5. In confined areas adjacent to footings and foundation walls and in utility trenches, the fill shall be compacted with hand-operated vibration tampers. The maximum lift thickness shall be four (4) inches. The degree of compaction attained shall be equivalent to that attained in the adjacent open areas where heavy rolling equipment is used. Any areas which subsequently settle shall be refilled to true subgrade and properly compacted.

D. Placing Subbase Fills (Compacted Graded Gravel, Pulverized Asphalt, and/or Drainage Stone)

1. Subbase fills, as specified herein above, shall be provided as follows:
 - a. As subbase under all pavement unless otherwise called for (note: pulverized asphalt shall be used only under vehicular pavements).
 - b. As subbase under and/or around footings and as shown on the Drawings or specified.
2. Place subbase in six (6) inch maximum layers; fill and compact each layer to ninety-five (95) percent maximum dry density.

3.7 GRADING

- A. Do all grading required for the work including shaping, trimming, rolling and finishing of the surface of the subgrades for all surfaces. All ruts shall be eliminated. Grading for subgrades for paved areas shall be finished at the required depth below and parallel to the proposed surface within 1/4" in 10'-0" tolerance.
- B. If, during the progress of rough grading work, any water pipe, sewer, conduit, drain, or other construction is damaged as a result of operations under this Contract, the Contractor shall repair all such damage at no additional cost to the Owner and restore work to its original condition.
- C. Do all other cutting, filling and rough grading to the lines and grades indicated on the Drawings. Grade evenly to the finished grades shown on the Drawings. No stone larger than 3" in largest dimension shall be placed in upper 6" of fill.
- D. Grading shall be brought to bottom of base course under areas to be paved.
- E. Complete grading operations after site improvements are constructed, and all materials, rubbish and debris removed from the site. Leave subgrade for planting

clean at required grades. Provide sufficient grade staking to witness correct lines and grades, as determined by the Landscape Architect.

- F. Where streets or sidewalks within or outside the limit of Contract lines have been excavated in fulfilling the work required under this Contract, the Contractor shall furnish and install all material necessary to bring finish surfaces level with the existing adjacent surfaces. All work shall be installed to match the existing conditions in accordance with the governing authority. Notify the proper authorities prior to restoring surfaces outside the limit of Contract line.

G. Tolerances

	<u>Area</u>	<u>Max Grading Tolerance +/-</u>
1.	Subgrade in landscaped areas prior to placement of loam	1/2" prior to placement of loam
2.	Pavement areas	1/4" in 10'

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SECTION 31 13 00 TREE PRUNING AND REMOVALS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the work under this Section.
- B. Under this Section, the Contractor shall furnish all labor, materials, equipment and transportation required to complete all aspects of the work in accordance with all local, state and federal regulations in force at the time of this Contract and in accordance with the various Items specified herein.
- C. The work of this Section consists of all tree pruning and removal work and related Items as specified herein and includes, but is not limited to:
 - 1. Crown Cleaning;
 - 2. Tree Removal.
- D. All work in this section shall be performed by a Massachusetts Certified Arborist. (See 1.02, Qualification of Arborist, below.)
- E. All trees to be pruned or removed are located on the site. All trees indicated shall be inspected by the Arborist and Landscape Architect before work is to be done. In addition to trees indicated for removal on the Drawings, trees should be removed for the following reasons: dead trees, hazardous trees, or trees in serious decline, as determined by a certified Arborist. If the Arborist discovers tree(s) which have not been marked for removal and are intended for pruning, but whose condition is such that removal is warranted, whether due to death, disease, decay, damage, or structural weakness, such tree(s) shall not be pruned and the Arborist shall immediately report these findings in writing to the Owner and await the Owner's direction before proceeding with work on the particular tree(s) in question.
- F. The intent of this portion of the Contract is to identify trees that should be removed while pruning all remaining trees on the site to provide safety, protection of property, clearance of roadways, walks, buildings and luminaries, and to improve the overall structure of the trees.
- G. The Contractor is required to review and inspect the site regarding trees to be removed (as indicated on the Drawings) prior to bid proposal in order to form his/her own assumptions as to the ultimate cost of the work.

1.2 QUALIFICATION OF ARBORIST

- A. Work on this section of the Contract shall be limited to individuals, partnerships and corporations who are actively engaged in the field of Arboriculture, and who demonstrate competence, experience and financial capability to carry out the terms of this project. Subcontractors must derive a majority of their income from arboricultural work. The Owner may require proof of these qualifications.
- B. Unless otherwise approved by the Owner, all work shall be conducted by qualified and trained personnel under the direct supervision of a Massachusetts Certified Arborist, in good standing. A Massachusetts Certified Arborist must be on site at all times during any pruning operations. The Contractor shall be required to provide proof of certification.

- C. Any subcontractor hired by the General Contractor to perform any portion of the work shall meet all qualifications herein and be acceptable to the Owner.

1.3 SPECIAL REQUIREMENTS

- A. Dutch elm disease wood (if any) shall be disposed of in accordance with provisions of General Laws, Chapter 87, Section 5, and Chapter 132, Section 8 and 11 as amended; and in accordance with any additional local regulations. Wood suspected of infestation with Asian Longhorn Beetle or Emerald Ash Borer (if any) shall be brought to the attention of the Town Arborist. All wood shall be removed from the site and be properly disposed of in accordance with state and local regulations.
- B. No burning is permitted on the project site.
- C. Prior to commencing work, the Contractor shall submit a plan for legal disposal of removed materials, acceptable to the Owner.
- D. The Contractor shall be required to place door hangers at all properties that abut a tree to be serviced. The door hanger will contain information regarding the Town's intention to prune the trees near their property. The Contractor shall be required to indicate the date when the trees will be serviced on the door hanger. The door hanger is to be placed 48 hours in advance of the work. Door hangers will be provided by the Owner.

1.4 STANDARDS AND DEFINITIONS

- A. Pruning and Removals shall conform to the following:
 - 1. American National Standards Institute (ANSI): Standard A300-2001 Standard Practices for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance
 - 2. American National Standards Institute (ANSI): Standard Z-133.1.-2001 Safety Requirements for Tree Care Operations – Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush
 - 3. All other applicable Occupational Safety and Health Administration (OSHA) standards, and state and local regulations.
- B. American National Standards Institute- (ANSI) is the private, non-profit organization that administers the safety and maintenance regulations for the Tree Care Industry.
- C. Crown Cleaning- The removal of dead, diseased, obstructing, split, and/or broken branches that are 2 inches in diameter or greater. Limbs that are susceptible to failure from dense or heavy foliar masses should be thinned.
- D. Crown Raising- The removal of lower tree branches to allow safe movement of vehicles and pedestrians under the canopy of the tree. Limbs above sidewalks shall be no lower than 10 feet from the ground. Limbs over the road shall be no lower than 16 feet from the ground.
- E. Crown Reduction- The technique used to reduce the overall mass of the tree by thinning out the top and sides or just removing individual limbs of the tree. Reduction pruning is commonly associated with pruning away from buildings, structures, signs, lights and other overhead obstructions.
- F. Crown Thinning- The selective removal of branches to increase light penetration and air movement. No more than 25% of the tree's living branches shall be removed.

- G. Crown Training- A pruning process that utilizes all the major pruning types to promote a strong central leader and strong scaffold branches on recently planted trees.
- H. D.B.H.- Diameter at breast height. The location on a tree 4.5 feet above ground where the diameter of the tree is measured.
- I. Massachusetts Certified Arborist- (MCA) An individual who is listed by the Massachusetts Arborist Association as a MCA who has passed a comprehensive exam and maintained their certification through the accumulation of continuing education credits.
- J. Occupational Safety & Health Administration- (OSHA) is the Federal agency responsible for insuring worker safety.
- K. Owner- the individual or designated representative responsible insuring the requirements of this Contract are adhered to.
- L. Street tree- Any tree planted and maintained within the public right of way under the jurisdiction of the Town of Maynard Department of Planning and Development.

1.5 EXAMINATION OF SITE AND DOCUMENTS

- A. The Contractor shall be responsible for having a clear understanding of the existing conditions of the site before submitting a bid for this Contract and shall be responsible for fully carrying out the work of the Contract, regardless of actual site conditions encountered.

1.6 ORDER OF WORK

- A. Before any work is started, the Contractor shall attend a conference with the Owner and the Landscape Architect. All trees to remain shall be pruned to provide safety, protection of property, clearance of roadways, walk, buildings and luminaries, and to improve the overall structure of the tree. The type of pruning to be performed includes but is not limited to crown cleaning, crown raising, crown reduction, crown thinning, and crown training. At this conference the Owner will also establish the order of precedence for carrying out the work.
- B. Based on the conference, the Contractor shall submit a schedule of work for the Owner's review and approval prior to beginning work. Any changes to this schedule must be approved by the Owner. Unless otherwise authorized by the Owner, failure of the Contractor to comply with the approved pruning and removal schedule shall be sufficient cause to give notice that the Contractor is in default of the Contract and will result in its termination. Unless otherwise authorized by the Owner, the Contractor must complete ALL pruning work within 40 business days from the notice to proceed.

1.7 CHANGES IN THE WORK

- A. The Owner reserves the rights to change, add, or delete areas or quantities to be pruned or removed as deemed to be in the Town's best interest.
- B. No claim for extra compensation or extension of time will be allowed on account of actual conditions inconsistent with those assumed by the Contractor.
- C. Any alterations or modifications of the work performed under this contract shall be made only by written agreement between the Contractor and the Owner. No claims for extra work or materials shall be allowed unless covered by written agreement.

1.8 PROTECTION OF VEGETATION TO BE PRESERVED

- A. The Contractor shall protect all existing trees, shrubs and lawns designated to remain for the length of the construction period. The placement of protection devices, such as snow fence enclosures, shall, however, be at the Contractor's discretion except those required by the Owner.
- B. Damage no plant to remain by burning, by pumping of water, by cutting of live roots or branches, or by any other means. No plants to be saved shall be used for crane stays, guys or their fastenings. Vehicles shall not be parked within the dripline of trees to remain, or wherever damage may result to trees to be saved. Construction material shall not be stored beneath trees to be saved.
- C. The Contractor shall be liable for any damage to any tree, shrub or lawn to remain, and shall immediately report to the Owner for appraisal of any damage and for determination of corrective treatment of compensation to the Owner.
- D. The Contractor shall compensate the Owner for damages by installing replacement tree(s) of the size and species approved by the Town, and of sufficient quantity such as the sum of the DBH inches for replacement trees equals the total DBH inches of the damaged tree(s). Damaged shrubs shall be replaced with shrub(s) of the same size, species, and quantity, unless determined otherwise by the Owner.
- E. Damaged shrubs or lawns shall be restored or replaced to match existing to remain to the satisfaction of the Owner, at no cost to the Owner.
- F. See also 01 57 00, Environmental Protection, part 3.7, for further instruction on Tree Protection measures required.

PART 2 - MATERIALS

2.1 EQUIPMENT AND MATERIALS

- A. Equipment necessary for this Contract shall be properly maintained and in good operating condition to the Town's satisfaction. The Contractor shall promptly remove and replace any equipment which the Owner deems to be in unsatisfactory repair or condition or otherwise unsuitable.
- B. At the discretion of the Owner, if the equipment failures, breakdowns or other related problems occur that are jeopardizing the meeting of deadlines established in the written schedule provided by the Contractor, the Contract will be terminated.
- C. Vehicles shall display prominently the Contractor's name, address, and telephone number on both doors.
- D. Aerial lift equipment shall be required for pruning and removal work unless otherwise approved by the Owner. Such equipment shall have a minimal working height of fifty-five (55) feet, and shall include an articulated upper boom, insulated lower boom, a ten to fifteen (10-15) cubic yard enclosed hydraulic dump body, pintlehook and attachments for a towed chipper, or approved equal.
- E. A chipper, meeting all OSHA requirements, shall be used which will process material up to twelve (12) inches in diameter.
- F. A crane or log loader shall be used on site to remove logs too large to be chipped.

2.2 PERSONNEL

- A. The Contractor shall submit each employee's name and title prior to the commencement of work. The Contractor shall provide a list of all Massachusetts Certified Arborists who will be working on this contract. This list shall include the names of those individuals and their certification number. The Contractor shall advise the Owner of any changes in the roster assigned to this contract.
- B. A crew shall consist of a minimum, one (1) tree trimmer/ climber, and one (1) ground person (one of which shall be a crew foreman and a Massachusetts Certified Arborist in good standing). The crew foreman shall have a minimum of five (5) years climbing and pruning experience.
- C. Each worker shall be experienced and highly qualified with necessary tree work skills to successfully complete this contract, including the ability and training to perform aerial rescue. Said skill shall also include worker safety and ability to be in compliance with current OSHA and ANSI Z-133.1 Standards.

PART 3 - EXECUTION

3.1 DESCRIPTION OF WORK

- A. Each tree to be pruned shall be serviced according to the following types of pruning, as needed: Crown Cleaning, Crown Raising, Crown Reduction, Crown Thinning and Crown Training.
- B. The Contractor shall adhere to the specifications and provide suitable facilities for inspecting the work. Failure of the Owner to immediately reject unsatisfactory work or to notify the Contractor of deviations from the Specifications shall not relieve the Contractor of responsibility to correct or remedy unsatisfactory work.
- C. The Contractor shall only work on trees designated by the Owner. No compensation will be made for work performed on any other trees.
- D. If the Contractor discovers tree(s) which have been marked for pruning, but whose condition is such that removal is warranted, whether due to death, disease, decay, or structural weakness, such tree(s) shall not be pruned and the Contractor shall report these findings to the Owner, in writing, within 24 hours, and await the Owner's direction before proceeding with work on the particular tree(s) in question.
- E. Tree removal is generally described as the removal of individual trees that have been found to be dead, hazardous, and/ or otherwise marked for removal by the Owner.

3.2 USE AND CARE OF THE SITE

- A. The Contractor shall leave the work site at the end of each working period in a condition satisfactory to the Owner.
- B. Pavements shall be swept and lawns or other surfaces raked or otherwise cleaned of all material related to the work operation. Degree of clean up required will be described by the Owner at the Pre-construction Conference and will be based upon the character of the work area.
- C. All trimmings or any other form of debris shall be collected, chipped, hauled and disposed of properly in accordance with all applicable laws at the Contractor's expense.
- D. No overnight parking of equipment will be allowed except if specifically authorized by the Town.

3.3 PRUNING PROCEDURES AND QUALITY CONTROL

- A. All pruning shall be performed in manner which maintains the natural aesthetic characteristics of the species and variety of trees. No topping or dehorning of trees or stubbing back of branches shall be permitted. All cuts shall be made to a lateral branch a minimum of one third (1/3) the size of the branch being removed, unless otherwise instructed by the Owner.
- B. The use of climbing spurs or spiked shoes shall not be permitted for pruning trees and their use will result in immediate cancellation of the Contract. They are only permitted during tree removal operations and emergency aerial rescue operations.
- C. All cuts shall be made sufficiently close to the parent stem so that wound closure can be readily started under normal conditions. Cuts shall never be made through the branch collar. Slab cuts, rip cuts and all other cuts that do not meet the most current edition of the ANSI A300 pruning standard will result in cancellation of the Contract.
- D. Luminaries and proper elevation over street and sidewalk surfaces to at least the following minimum specifications:
 - 1. Sidewalk/Paths – All branches shall be pruned to allow a minimum ten (10) foot clearance over sidewalks and paths, including proposed new paths.
 - 2. Luminaries – Any and all branches extending directly below a street light, limiting the light reaching the street or path shall be removed and all branches shall be cut back to afford a minimum four (4) foot clearance.
 - 3. House/Building – All branches shall be pruned to allow a minimum of five (5) foot clearance away from homes and buildings, or if possible ten (10) foot clearance where trees will not be severely disfigured due to crown reduction, this shall be determined by the Town Arborist.
 - 4. Street/Roads – All branches shall be pruned to allow a minimum sixteen (16) foot clearance over street surface.
- E. All limbs over two inches in diameter to be removed shall be precut to prevent splitting. Any branches that would injure the tree or other objects by falling shall be lowered to the ground by proper rigging and rope procedures.
- F. Remove one of two crossed or rubbing branches where practical so the removal will not leave large holes in the general outline of the tree.
- G. On trees known to be diseased, tools are to be disinfected with alcohol after each cut between trees and where there is known to be a danger of transmitting the disease on tools.
- H. Lateral branches as well as occasional water sprouts may be retained. Complete removal of secondary laterals and water sprouts resulting in the stripping of major limbs, will not be permitted.

3.4 REMOVAL PROCEDURES AND QUALITY CONTROL

- A. Trees designated to be removed shall be taken down and all leaves, branches and trunks of trees properly disposed of by chipping or removal from the premises.
- B. Trees are to be felled in such a manner that does not injure trees to be saved or endangers or harms the public and adjacent property.
- C. Removal of all parts of each tree, excluding the stump, shall be completed on the same day that the removal process is started, including the trunk (or butt) of the tree.
- D. Stump removal shall consist of grinding the stump and any roots to a depth of six inches below grade and the disposal of the wood waste. The area or tree pit is to be

left at the finish grade using the specified planting mix that meets the requirements laid out in section 32 90 00. Unless otherwise approved by the Owner, the stump must be removed within ten (10) business days from the date the above ground portion of the tree is removed.

3.5 SAFETY

- A. All equipment to be used and all work to be performed must be in full compliance with all standards as promulgated by OSHA at the time of bidding, including, but not limited to those regulations concerning noise levels, protective devices and operator safety.
- B. The Contractor shall be solely responsible for pedestrian and vehicular safety and control within the work site and shall protect the public and its property from injury or damage that could be caused by the progress of the work. To this end the Contractor shall post all work areas. The Contractor must also provide police details and/or erect and maintain protective devices acceptable to the Town Arborist, including but not limited to barricades, lights and warning signs.
- C. Any practice employed by the Contractor that is obviously hazardous, as determined by the Town Arborist, shall be immediately discontinued.

3.6 FINAL ACCEPTANCE

- A. Upon completion of the work the Contractor shall notify the Owner in writing and request that a final inspection for acceptance be made.

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SECTION 31 31 19 VEGETATION CONTROL

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions of the Contract and Division 1 General Requirements apply to the work under this Section.
- B. The Work of this section is integral with the whole of the Contract Documents and is not intended to be interpreted outside the context. This Section consists of the provision of all materials, labor, equipment and the like for the complete execution of all planting and lawn establishment and related items as indicated on the Drawings and/or as specified herein.
- C. All references to products by manufacturer, trade name or performance Specifications bearing the connotation "or Approved Equal" shall be as determined by the Landscape Architect and the Town, per MGL c. 30 s. 39M, part b, criteria 1.
- D. All Contractors shall comply with all laws, regulations, and quarantines for agricultural and horticultural products.
- E. For the purposes of all Work within this Section and related work in other sections, references to "Contractor" shall mean the particular Contractor or Subcontractor proposed for the work. Bidders should include the qualifications of the proposed Vegetation Management work crew (whether their own or a proposed Subcontractor) at the time of bid submission.

1.2 WORK INCLUDED

- A. The principal Work of this Section consists of all vegetation management work, including the provision of all materials, labor, equipment, services and incidentals necessary to complete all of the Work in accordance with the Contract Documents, and the like for the complete execution of all vegetation management and related items, as indicated on the Drawings and/or as specified herein and includes, but is not limited to the following:
 - 1. Invasive plant removal;
 - 2. Selective clearing;
 - 3. Bare soil stabilization.

1.3 SPECIAL CONDITIONS

- A. No burning will be permitted on the project site.
- B. Prior to commencement of Work, the Contractor shall submit a plan for legal disposal of removed materials, acceptable to the Owner.
- C. Prior to commencement of work, the General Contractor, Vegetation Control Contractor (if different), Landscape Architect, and Owner's Representative shall have a on-site vegetation management meeting to review all plant removals, and determine extents of invasive removals, selective clearing, and stabilization areas.

1.4 REFERENCES

- A. Examine all other Sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of other trades. Cooperate with all other trades and all departments of the Town of Maynard and coordinate all work under this Section therewith.
- B. The following related items are included under the Sections listed below:
 - 1. Section 01 57 00 – Environmental Protections
 - 2. Section 02 01 00 – Maintenance of Existing Conditions
 - 3. Section 02 41 00 – Site Preparation and Demolition
 - 4. Section 31 00 00 – Earthwork - Clearing, Excavation, Filling and Grading
 - 5. Section 31 13 00 – Tree Pruning and Removals
 - 6. Section 32 90 00 – Planting

1.5 SUBMITTALS AND PRODUCT LITERATURE

- A. For each product or material used, submit manufacturer's product data, including installation instructions, use, limitations and recommendations.
- B. Do not order material until Landscape Architect's approval has been obtained. Delivered materials shall closely match the approved samples.
- C. Submit the following:
 - 1. Invasive plant removal plan: Contractor to submit a work plan prior to commencement of work & after initial site meeting with the landscape architect to review scope of work. Invasive species removal plan shall outline a time line of work & proposed methods of plant removal.
 - 2. Herbicides proposed for invasive plant removal.

1.6 DEFINITIONS

- A. The following related items are included herein and shall mean:
 - 1. SSHB: The Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, latest edition
 - 2. AOAC: Association of Official Agricultural Chemists
 - 3. AAN: American Association of Nurserymen

1.7 EXAMINATION OF SITE CONDITIONS

- A. All areas included in vegetation management work shall be inspected by the Contractor before starting work and any defects shall be reported to the Landscape Architect prior to beginning this work. The commencement of work by the Contractor shall indicate his acceptance

1.8 ENVIRONMENTAL REQUIREMENTS

- A. Contractor shall not work on or with soils when they are dry, wet, or frozen. Field Test: Form soil in palm of hand; if soil retains shape and crumbles upon touching, then it may be worked (if it will not retain its shape, it is too dry; if it does not crumble, it is too wet). Landscape Architect shall be final authority on condition of soil.

1.9 PROTECTION

- A. The Contractor shall be liable for any damage to property caused by the work, and all areas disturbed shall be returned to their original condition to the satisfaction of the Landscape Architect. During all work of this section, the Contractor shall protect all site improvements from contact with agricultural chemicals, soil amendments, and fertilizers.
- B. The Contractor shall provide all erosion, sedimentation, and environmental controls necessitated by site and governing codes.
- C. Damage no plant to remain by burning, by pumping of water, by cutting of live roots or branches, or by any other means. No plant to be saved shall be used for crane stays, guys, or their fastenings. Vehicles shall not be parked within the dripline of trees to remain, or wherever damage may result to trees to be saved. Construction material shall not be stored within the dripline of trees to be saved.

1.10 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Contractor shall show proof of experience on 5 public projects comparable in scope and size.
 - 2. Vegetation control contractor & crew leader shall be certified to apply herbicides in the state of Massachusetts. Crew leader shall be on site at all times when work is being performed. Documentation of certification must be included with bid.
 - 3. Vegetation Control contractor and crew leader shall be a Massachusetts licensed pesticide applicator and shall be on site at all times when work is being performed.

1.11 WARRANTIES

- A. Manufacturers shall provide their standard guaranties for work specified in the Section. However, such guaranties shall be in addition to and not in lieu of all other liabilities which manufacturers and Contractor may have by law or by other provisions of the Contract Documents.

PART 2 - PRODUCTS

2.1 INVASIVE PLANT REMOVAL

- A. Vegetation Control Contractor to submit a work plan prior to commencement of work & after initial site meeting with the landscape architect to review scope of work. Invasive species removal plan shall outline a time line of work & proposed methods of plant removal. Plan should also describe control methods, products to be used, impact to non-target organisms, and estimated XX% control these methods should yield under ideal conditions during the first year. Plan should also include maintenance and protection measure for the project period.
- B. Invasive species to be removed shall be determined by the United States Department of Agriculture (USDA) list & the Massachusetts Invasive Plant Advisory Committee (MIPAG) list. Species identified on site to be reviewed by landscape architect. Certain species identified maybe be designated as top priorities.

1. Particular invasive plants in need of management which are present on site include, but are not limited to, the following list:
 - a. *Fallopia japonica* (Japanese Knotweed)

2.2 SELECTIVE CLEARING

- A. Areas on the plan designated for selective clearing are to be confirmed in field at the pre-construction vegetation management meeting.
- B. Selective clearing to consist of invasive plant removal, see 2.1 above, and removal of woody plants less than 4" caliper measured 1' above existing grade. Some plants less than 4" caliper measured 1' above existing grade may be tagged to remain by Landscape Architect and Owner's Representative.
- C. Selective clearing may include removal of invasive vines in desirable landscape trees, shrubs and plants to remain.

2.3 BARE SOIL STABILIZATION

- A. Bare soil tabilization shall occur wherever site clearing or invasive plant removal takes place. The method of stabilization used shall be the addition of topsoil or topdressing of existing lawn or meadow areas and the hydroseeding of meadow or lawn grass seeding, as well as soil stabilization mats in areas with a finished grade slope of 1:4 or greater. In areas requiring the addition of topsoil or topdressing of existing lawn or meadow areas, the added soil shall be 6" depth minimum.

PART 3 - EXECUTION

3.1 INVASIVE PLANT REMOVAL

- A. The method of removal used shall be industry accepted methods appropriate for each species identified. Acceptable methods of removal are as follows:
 1. Mechanical
 - a. Acceptable mechanical tools are as follows: chain saws, brush cutters, weed wrenches, lopping shears, mattocks, bush hogs, hand clippers and girdling. Other mechanical methods may be considered.
 - b. Note that due to the presence of Japanese Knotweed, mechanical removal must be COMPLETE and include all rhizomes and pieces; care must be taken to prevent the migration of pieces into other areas of the site on equipment or footwear.
 2. Chemical
 - a. Acceptable chemical methods of removal are as follows: Backpack sprayers, Hand sprayers and Injection guns. Other chemical methods may be considered. Roots need to be addressed as appropriate for the species being treated.
 - b. Prior to using any herbicides, The contractor is to submit a detailed analysis of the chemical components of the herbicide and its effects on the environment.
 - c. Contractor is to follow herbicide label guidelines and restrictions for recommended rates, application timing, adjuvant, rain fastness,

temperature restrictions, and wind-speed restrictions and any relevant restrictions.

- d. After completion of herbicide applications, a detailed log shall be submitted to the landscape architect.
- 3. Biological
 - a. A biological control of an invasive plant is a natural enemy such as a parasite, predator or disease organism is introduced into the environment of a pest or, if already present, is encouraged to multiply and become more effective in reducing the number of pest organisms.
- 4. Dispose of any removed invasive materials legally off-site.
- B. Contractor shall consult specification section 01 57 00 Environmental Protections for protection of desirable landscape trees, shrubs and plants to remain within invasive species removal areas.
- C. Contractor shall replace any substantially damaged desirable landscape trees, shrubs and plants.

3.2 MAINTENANCE AND PROTECTION OF VEGETATION MANAGEMENT AREAS

- A. Maintenance shall begin immediately after each treatment is performed and shall continue for a minimum of ninety (90) days or until the final acceptance of the project. The minimum maintenance period shall be ninety (90) calendar days after completion of work performed installations.
- B. Maintenance shall consist of continuing management treatment per the submitted while work is being performed on the project.
- C. Contractor shall warranty vegetation management work for 1 year.
- D. Protection: Planting areas and plants shall be protected per the submitted plan against trespassing and damage of any kind. This shall include the provision and installation of approved temporary fencing if necessary.

3.3 SELECTIVE CLEARING

- A. Contractor shall consult specification section 01 57 00 Environmental Protections for clearing and grubbing, selective clearing methods, and protection of desirable landscape trees, shrubs and plants to remain.

3.4 BARE SOIL STABILIZATION

- A. Contractor shall consult specification section 01 57 00 Environmental Protections for protecting and minimizing exposed areas.
- B. Landscape Architect and Owner to inspect soil stabilization prior to final acceptance of work to ensure that stabilization efforts are sufficient to establish new plantings & reduce or eliminate erosion. At time of inspection, if new vegetation establishment is insufficient or slope shows signs of recent or ongoing erosion, Contractor may be required to extend the maintenance period by an additional 60 days within the growing season.

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SECTION 32 10 00
BASES, BALLASTS, PAVING, AND EDGING

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the work under this Section.

1.2 WORK INCLUDED

- A. Provide all labor, equipment, implements and materials required to furnish, install, construct and perform all paving operations complete as shown on drawings and specified herein.
- B. Work includes, but is not limited to the following:
 - 1. Fill Material;
 - 2. Raised Granite Curb;
 - 3. Granite Step;
 - 4. Timber Steps;
 - 5. Crushed Stone Surfacing;
 - 6. Stabilized Stone Dust.

1.3 REFERENCES

- A. Examine all other sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of other trades. Cooperate with all trades and all departments of the Town of Maynard and coordinate all work under this Section.
- B. The following related items are included under the Sections list below:
 - 1. Section 02 41 00 – Site Preparation and Demolition
 - 2. Section 03 30 00 – Cast In Place Concrete
 - 3. Section 31 00 00 - Earthwork – Clearing, Excavation, Filling and Grading
 - 4. Section 32 18 16 – Playground Protective Surface.

1.4 DEFINITIONS

- A. The following related items are included herein and shall mean:
 - 1. S.S.H.B. – Standard Specifications for Highways and Bridges, the Commonwealth of Massachusetts, Department of Public Works, latest edition.
 - 2. A.S.T.M. – American Society for Testing and Materials.
 - a. D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.
 - b. E303 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.

- c. D3389 Abrasion Testing.
 - d. DIN 1835 Part 6-Permeability to Water.
 - e. U. S. Environmental Protection Agency Method 3052:1996.
 - 3. A.A.S.H.T.O. – American Association of State Highway and Transportation Officials.
 - 4. MassDOT. Standard Specifications - Latest edition of the Standard Specifications for Highways, Bridges and Waterways, The Commonwealth of Massachusetts Department of Transportation, 1988 edition.
 - 5. A.N.S.I. - American National Standards Institute
 - a. A-118.4 Fast-setting latex thin-set mortar and latex Portland cement mortar
 - b. A-118.11 EGP latex Portland cement mortar.
 - c. A-108.01 General Requirements for Subsurfaces and Preparations by Other Trades
- 1.5 Job Conditions
- A. Start of work under this Section shall constitute acceptance of the foundation conditions to which this work is to be applied. Any defects in work resulting from such conditions shall be corrected under this Section, at no extra cost to the Owner.
 - B. Maintain sub-base in satisfactory condition and properly drained until surface improvement is placed.
- 1.6 SUBMITTALS
- A. Do not order materials or begin installation of work of this Section until Owner approval of submittals of all products has been obtained.
- 1.7 DELIVERY, STORAGE, AND HANDLING
- A. Deliver products in original packaging, labeled with product identification, manufacturer, batch number, and shelf life.
 - B. Store products in a dry area with temperatures as required by product Manufacturers.
 - C. Handle products in accordance with manufacturer's printed recommendations.

PART 2 - PRODUCTS

2.1 FILL MATERIALS

All fill used to bring site to subgrade shall be subbase fill as defined below.

- A. Samples and Testing:
 - 1. All new fill material and its placement shall be subject to quality control testing. A qualified laboratory will be selected by the Owner to perform test on materials. All costs of testing will be paid for by the Contractor. Test results and laboratory recommendations shall be available to the Landscape Architect. Submit one test for each material source proposed for use.

2. Provide samples of each fill material from the proposed source of supply. Allow sufficient time for testing and evaluation of results before material is needed. Submit samples from alternate source if required.
 3. The Landscape Architect will be sole and final judge of suitability of all material.
 4. The laboratory will determine maximum dry density and optimum water content in accordance with ASTM D1557, Method D and the in-place density in accordance with ASTM D1556.
 5. Test of material as delivered may be made from time to time. Materials in question may not be used, pending test results. Tests of compacted materials will be made regularly. Remove rejected materials and replace with new, whether in stockpiles or in place.
 6. Cooperate with laboratory in obtaining field samples of in-place materials after compaction. Furnish incidental field labor in connection with these tests.
- B. Compacted Graded Gravel / Structural Fill
1. All new material under paving shall be compacted graded gravel; all footings and all voids left from equipment removal shall be filled with compacted graded gravel.
 2. All structural fill shall meet the specifications of M1.03.1 "Processed Gravel for Subbase" in S.S.H.B. Submit sample and test results to Contracting Officer for approval.
- C. Drainage Stone (3/4" Crushed Stone):
1. Drainage stone, or 3/4" crushed stone, shall be 3/4" (except where other size indicated on the Drawings) clean, angular stone of a hardness suitable for use in structural applications. Drainage Stone shall comply with M2.01.4 of SSHB.

2.2 RAISED GRANITE CURB

- A. Raised granite curb shall be a structural granite conforming to ASTM C615, Class I Engineering Grade, suitable for curbstone use.
1. Curb material shall conform to M.H.D. Specifications.
 2. Raised Granite Curb shall be 4" Wide and 18" High or greater.
 3. Typical length of new curb sections shall be 8'-0". Minimum length of new curb sections shall be 4'-0".
 4. Ease all exposed edges.
- B. Mortar for pointing joints between curbstones shall be a cement mortar composed of one part portland cement and two parts sand, by volume with sufficient water to form a workable, stiff mixture.

2.3 GRANITE STEP

- A. Granite Step shall be Woodbury Gray granite or Approved Equal tightly-grained gray granite.
- B. Granite shall have a thermal finish on all exposed surfaces, and cleanly sawn edges on all other surfaces.

1. Provide samples for approval showing the full range of expected color and finish variations for each use.

2.4 TIMBER STEP

- A. Timbers shall be high-density polyethylene timbers with colorants and UV stabilizers for outdoor use, including a minimum of 85% recycled content, "Select Plastic Lumber" by Bedford Technologies (www.plasticboards.com) or Approved Equal, of the sizes indicated on the Drawings and of the lengths required. Color to be selected by the Landscape Architect from the manufacturer's full range of color options.
- B. Reinforcing rods to be #6 (3/4") re-bar, at least 3 per timber (2 per timber for lengths shorter than 5'), 3' on center maximum.
- C. Countersink plugs of matching recycled plastic, glued in place as recommended by timber manufacturer, to cover reinforcing rod ends.
- D. All hardware should be stainless steel or galvanized, and sized per manufacturer's recommendations.

2.5 CRUSHED STONE SURFACING

1. Crushed Stone Surfacing shall be 3/8" nominal size clean, angular stone of a hardness suitable for use in structural applications and free of stone dust or fine particles. Crushed Stone shall comply with M2.01.6 of SSHB.

2.6 STABILIZED STONE DUST

- A. All stone dust and equipment shall be free of plant debris, organic matter, soil and weed seeds.
- B. Stone
 1. Stone for paving to be decomposed granite 3/8" or 1/4" crushed aggregate screenings. Sand and crushed stone shall consist of inert materials that are hard and durable, with stone free from surface coatings and deleterious materials. Gradation requirements shall be as follows: Crushed Stone Sieve Analysis Percentage of Weight Passing a Square Mesh Sieve AASHTO T11-82 and T2782.

1/4" MINUS AGGREGATE GRADATION

US Sieve No.	Percent Passing by Weight
#3/8"	100
#4	90-100
#8	75-80
#16	55-65
#30	40-50
#50	25-35
#100	15-20
#200	10-15

2. Color to be determined by Landscape Architect. Submit sample(s) as requested.
3. Stabilizer Binder
 - a. Binder to be: Stabilizer for Stabilized Aggregate surfaces provided by the following manufacturer: Stabilizer Solutions, Inc. 33 South 28th St., Phoenix, AZ 85034; phone (602) 225-5900, distributed by: Read Custom Soils, 158 Tihonet Road, Wareham, MA 02571 (ph 781.828.6300), or Approved Equal.
 - b. Binder shall be a non-toxic, organic, colorless and odorless concentrated powder that binds decomposed granite or crushed 3/8" or 1/4" minus aggregate. Product to have 64% re-consumer recycled content. Product shall have 25 years experience at same formulation.

PART 3 - EXECUTION

3.1 RAISED GRANITE CURB

- A. Curb shall be set in an 18" wide trench. Excavation shall be filled to required level to support curb at final grade with base course material. Fill for this purpose shall consist of fine gravel or very coarse sand thoroughly tamped. (Note: in areas adjacent to existing trees, adjust depth and width of trenching as required to avoid damage to structural roots and minimize damage to feeder roots.)
- B. Vertical face of vertical curb shall be plumb, with curb parallel to adjacent surface.
- C. Curb shall be set accurately to line and grade. Curb units shall be fitted together as closely as possible, with maximum joint spacing no larger than 1/4". Curb shall not be field cut. Final points may be joined by closure pieces made to order.
- D. Joints between curb units shall be carefully filled with a cement mortar, and neatly pointed on the top and front exposed portions. After pointing, excess mortar shall be cleaned from curb surface.
- E. Backfill material shall be as specified for adjacent surface and shall be thoroughly compacted by means of power tampers. Extreme care shall be taken not to destroy alignment. Curb sections disturbed during backfilling or otherwise shall be reset to line and grade, and properly backfilled.

3.2 GRANITE STEP

- A. Granite step treads shall be installed on a mortar setting bed.

3.3 TIMBER STEPS

- A. Install as directed by Drawings and manufacturer's specs. Contractor to touch up any scratches and all mars to surfaces and finishes.

3.4 CRUSHED STONE SURFACING

1. Crushed stone surfacing shall be installed as shown on the Drawings. Ensure that all root material has been removed from the subsurface material before installing crushed stone.

2. Care shall be taken during installation to avoid damage to the historic stone foundation. See Section 02 01 00.

3.5 STABILIZED STONE DUST

A. Preparation:

1. Base shall be 6" dense graded gravel.
2. Pre-soak base material with water and compact to 95% determined by test method ASTM D 1557 prior to installing Stabilized Aggregate. Compaction testing to be provided by contractor, one test per 2,000 square feet.

B. Blending Stabilizer

1. Stabilizer shall be thoroughly pre-mixed with aggregate at the rate of 15 lbs of Stabilizer per 1 ton of aggregate. Verify with manufacturer correct Stabilizer rate for your project and climate. Drop spreading of Stabilizer over pre-placed aggregate or mixing by rototilling is not acceptable. Stabilizer shall be mechanically pre-mixed per manufacturer's recommendations using an approved mechanical blending unit to adequately blend Stabilizer with aggregate (Bucket blending is not an approved blending apparatus). Always blend Stabilizer and aggregate DRY.

C. Placement

1. After pre-blending, place Stabilized Aggregate directly on prepared sub-grade. Level to desired grade and cross section. Depth of pathways shall be 3" for heavy foot traffic and light vehicles. DO NOT use filter fabric. Contact Stabilizer Solutions, Inc. for installation on slopes greater than 8%.

D. Watering

1. Water heavily for full-depth moisture penetration of profile. Water activates Stabilizer. Apply 25 to 45-gallons of water per 1-ton to achieve saturation. Randomly test for depth using a probing device, which reaches full depth.
2. Contractor shall wait a minimum of 6 – 72 hours or until such time that the Stabilized Aggregate is able to accept compaction from a 1 to 5 ton roller without separation.
3. If surface aggregate dries significantly quicker than subsurface material, lightly mist surface before compaction.

E. Compaction

1. Compact Stabilized Aggregate to 85% relative compaction by equipment such as; a 2 to 5-ton double drum roller making 3 to 4 passes. Do not begin compaction for 6 hours after placement and up to 72 hours. DO NOT use a vibratory plate compactor or vibration feature on roller, as vibration separates large aggregate particles. If pumping or pancaking of surface occurs, surface is still too wet to roll.
2. Take care in compacting surface when adjacent to planting and irrigation systems, use 8" or 10" hand tamp. Installation of Stabilized Aggregate more than 3" thick shall be installed in lifts. If 4" thick compacted (2) 2" lifts. If 5" thick compacted (2) 2.5" lifts. If Stabilized Aggregate is pre-moistened before installation entire 4" or 5" lift may be installed.

3. Lightly spray surface area following compaction. Do not disturb aggregate surface with spray action.

F. Inspection

1. Finished surface shall be smooth, uniform and solid with no evidence of chipping or cracking. Cured and compacted pathway shall be firm throughout profile with no spongy areas. Loose material shall not be present on surface after installation, but may appear after use and according to environmental conditions. Pathway shall remain stable underneath loose granite on top with a "natural" look. Any significant irregularities in path surface shall be repaired to the uniformity of entire installation.

G. Protection

1. Contractor shall furnish and install construction fence around new surface to prevent public access. Fencing shall be maintained in place for a minimum of 12 - 72 hours after completion of installation, or as directed by the Owner's Representative. Drying period may take longer due to weather conditions.
2. Contractor shall notify Owner's Representative that landscape irrigation shall be restricted near Stabilized Aggregate surface until drying period is complete. Standing water on surface and adjacent to path shall be restricted at all times.

H. Maintenance

1. Remove debris, such as paper, grass clippings, or organic material by mechanically blowing or hand raking as needed. When plowing snow, use rubber baffle on plow blade or wheels on plow to lift blade 1/4" off the surface.
2. During first year, minor amounts of loose aggregate may appear on surface (1/16 to 1/4"). If material exceeds a 1/4", redistribute over entire surface. Water to 1" depth and compact with power roller of no less than 1000-lbs. Repeat as needed. If cracking occurs, sweep fines into cracks, water thoroughly and hand tamp with an 8" – 10" hand tamp.

I. Repairs

1. Excavate damaged area to the depth of the Stabilized Aggregate and square off sidewalls.
2. If area is dry, moisten damaged portion lightly.
3. Pre-blend the dry required amount of Stabilizer® with the proper amount of aggregate in a concrete mixer.
4. Add water to the pre-blended Stabilized Aggregate. Thoroughly moisten mix with 25 to 45 gallons per 1-ton of pre-blended material or to approximately 10% moisture content.
5. Apply moistened pre-blended Stabilized Aggregate to excavated area to finish grade.
6. Compact with an 8" to 10" hand tamp or 250 to 300 pound roller. Keep traffic off areas for 12 to 48 hours after repair has been completed.

END OF SECTION

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SECTION 32 31 00 FENCING

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the work under this Section.
- B. All references to products by manufacturer, trade name or performance Specifications bearing the connotation "or Approved Equal" shall be as determined by the Landscape Architect and the Town, per MGL c. 30 s. 39M, part b, criteria 1.

1.2 WORK INCLUDED

- A. Provide all labor, equipment, implements and materials required to furnish, install, construct and perform all site improvements complete as shown on the Drawings and specified herein.
- B. To be included, but not limited to the following:
 - 1. Concrete Footings;
 - 2. Tubular Steel Fencing & Gate.

1.3 REFERENCES

- A. Examine all other Sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of other trades. Cooperate with all trades and all departments of the Town of Maynard and coordinate all work under this Section therewith.
- B. The following related items are included under the Sections listed below:
 - 1. Section 02 41 00 – Site Preparation and Demolition
 - 2. Section 03 30 00 - Cast in Place Concrete
 - 3. Section 31 00 00 - Earthwork - Clearing, Excavation, Filling and Grading
 - 4. Section 32 10 00 - Bases, Ballasts, Paving, and Edging

1.4 SUBMITTALS AND SHOP DRAWINGS

- A. Submit complete shop drawings, product literature, catalog cuts and / or samples for all items indicating material characteristics, fabrications, details of construction, connections and relationship with adjacent construction, called for on the Drawings and as specified and in accordance with applicable requirements under Division 1.
- B. Take field measurements prior to preparation of shop drawings and fabrication. Allow sufficient time for shop drawing review and approval, before fabricating or ordering.
- C. Do not order materials or begin installation of Work of this Section until Owner's / Landscape Architect's approval of submittals has been obtained. Delivered materials shall closely match approved samples.

1.5 SAMPLES

- A. Initial Selection Samples: Submit samples showing complete range of colors, textures and finishes available for each material used.
- B. Verification Samples: Submit representative samples of each material that is to be exposed in the finished work, showing the full range of color and finish variation expected.

1.6 PRODUCT LITERATURE

- A. For each product or material used, submit manufacturer's product data, including installation instructions, use, limitations and recommendations.

1.7 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in manufacturer's original unopened and undamaged packages and containers with labels legible and intact.
- B. Store and handle materials in accordance with manufacturer's instructions. Prevent damage and deterioration of products from the environment and construction operations.
- C. Handle in accordance with manufacturer's instructions.

1.8 JOB CONDITIONS

- A. Examine all surfaces to receive site improvements to see that they are in proper condition to receive the Work specified. Report to the Engineer in writing all unacceptable areas. All defects resulting from use of accepted surfaces shall be corrected by the appropriate Contractor at no additional expense to the Owner.
- B. Start of Work under this Section shall constitute acceptance of the site conditions to which this Work is to be applied. Site preparation shall be of proper approved quality. Any defects in Work resulting from such conditions shall be corrected under this Section, at no extra cost to the Owner.
- C. Environmental Requirements: Contractor shall not Work on or with soils when they are dry, wet, or frozen. Field Test: Form soil in palm of hand; if soil retains shape and crumbles upon touching, then it may be worked (if it will not retain its shape, it is too dry; if it does not crumble, it is too wet). Landscape Architect shall be final authority on condition of soil.

1.9 DEFINITIONS

- A. The following items are included herein and shall mean:
 - 1. A.A.S.H.T.O. - American Association of State Highway and Transportation Officials.
 - 2. S.S.H.B. - Standard Specifications for Highway and Bridges, the Commonwealth of Massachusetts, Department of Public Works, latest edition.
 - 3. A.S.T.M. - American Society for Testing and Materials. The following standard specifications are applicable to the associated items as listed.
 - a. A36...Steel
 - b. A153...Zinc Coating (hot-dip) on hardware
 - c. A307...Carbon Steel bolts 66000 psi tensile

- d. C 55...Concrete Building Brick
 - e. C 62...Building Brick (Solid Masonry Units made from Clay or Shale)
 - f. C 139...Concrete Masonry Units for Construction of Catch Basins
 - g. C 140...Sampling and Testing Concrete Masonry Units
 - h. C 270...Mortar for Unit Masonry
 - i. D 3034...Type PSM Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings
 - j. D 3212...Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
- 4. CPSC - Consumer Product Safety Council.
 - 5. ADA - Americans with Disabilities Act and its current regulations.
 - 6. AWS: American Welding Society
 - 7. SSPS: Steel Structures Painting Council

1.10 WARRANTIES

- A. Attention is directed to provisions of the CONDITIONS OF THE CONTRACT and applicable parts of Division 1 regarding guaranties and warranties.
- B. Manufacturers shall provide their standard guaranties for Work specified in the Section. However, such guaranties shall be in addition to and not in lieu of all other liabilities which manufacturers and Contractor may have by law or by other provisions of the Contract Documents.

1.11 QUALITY ASSURANCE

- A. Comply with applicable codes, ordinances and regulations. Provide products of acceptable manufacturer's which have been in satisfactory in similar service for three years. Use experienced installers.

PART 2 - PRODUCTS

2.1 CAST-IN-PLACE CONCRETE (FOOTINGS)

- A. Cast-in-place concrete for footings shall conform to all specifications in 03 30 00: Cast-in-Place Concrete.
- B. Cement for anchoring posts in concrete shall be a non-shrink, non-metallic cementitious grout suitable for exterior use, "Super Por-rok" by Hallmite, "Sika Colma-Dur" by Sika Co., "Five Star Grout" by Five Star Co., or Approved Equal.

2.2 TUBULAR STEEL FENCING & GATE

- A. Tubular Steel Fence is to be Montage Industrial Classic Design, Extended Picket Bottom Rail Treatment, 2-Rail Style as manufactured by Ameristar Fence Products, Inc, Tulsa Oklahoma, or Approved Equal.
- B. Steel material for fence framework (i.e. tubular pickets, rails and posts), shall be galvanized prior to forming in accordance with the requirements of ASTM A653/A653M, with minimum yield strength of 45,000 psi (310 MPa) an a minimum zinc (hot-dip galvanized) coating weight of 0.50 oz/ft2 (184 g/m2) Coating

Designation G-60. A minimum of 62% of the steel material shall be derived from recycled scrap metal.

- C. Material for pickets shall be 1" square x 16 Ga. tubing. The rails shall be steel channel, 1.75"x1.75"x.105". Picket holes in the rail shall be spaced 4.715" o.c. Gate Posts shall meet the industry standard minimum requirements. Fence posts and gate posts shall meet the minimum size requirements of the Drawings.
- D. Fabrication
 - 1. Pickets, rails and posts shall be precut to specified lengths. Rails shall be pre-punched to accept pickets.
 - 2. Pickets shall be inserted into the pre-punched holes in the rails and shall be aligned to standard spacing using a specially calibrated alignment fixture. The aligned pickets and rails shall be joined at each picket-to-rail intersection by a fusion welding process, thus completing the rigid panel assembly (Note: The process shall produce a virtually seamless, spatter-free, good-neighbor appearance, equally attractive from either side of the panel).
 - 3. The manufactured panels and posts shall be subjected to an inline electrodeposition coating (E-coat) process consisting of a multi-stage treatment/wash, followed by a duplex application of an epoxy primer and acrylic topcoat. The minimum cumulative coating thickness of epoxy and acrylic shall be 2 mils (0.0588 mm). The color shall be black. The coated panels and posts shall be capable of meeting the performance requirements for each quality characteristics specified below:
 - a. Adhesion: over 90% of the test area (D3359-Method B ASTM Test Method)
 - b. Corrosion Resistance: Over 1,000 hours (B117, D714, D1654 ASTM Test Method)
 - c. Impact Resistance: Over 60" lbs (D2794 ASTM Test Method)
 - d. Weathering Resistance: Over 1,000 hours (B822, D2244, D523 ASTM Test Method)
 - 4. The manufactured fence system shall be capable of meeting the vertical load, horizontal load, and infill performance requirements for Industrial weight fences under ASTM F2408.
 - 5. Swing gates shall be fabricated using 1.75"x14 ga double channel rail, 2" sq. x 12 ga. Gate ends, and 1" sq. x 14 ga. Pickets. All rail and upright intersections shall be joined by welding. All picket and rail intersection shall be also joined by welding. Gusset plates will be welded at each upright to rail intersection.

PART 3 - EXECUTION

3.1 CAST-IN-PLACE CONCRETE FOOTINGS

- A. Concrete footings shall conform to the specifications contained in 03 30 00, Cast-In-Place Concrete.
- B. Install all footings plumb and true.
- C. Excavation for posts footings shall be in firm undisturbed or compacted soil. Excavate the holes to the lines and grades shown in the drawings with a 6" minimum

clearance between the bottom of the hole and the bottom of the fence post in its final location. Where ledge is encountered, the Contractor shall notify Landscape Architect to determine method of installation. Payment for any additional work required when installations are in ledge shall be in accordance with 31 00 00.

- D. Embedments into footings shall be cast-in-place, cored and embedded, or sleeved and embedded, following all instructions in 02500.3.06.D.3, Cast-In-Place Concrete: Embedded Items. Cored or sleeved items shall be securely anchored in place with a non-shrink, non-metallic waterproof grout suitable for buried use.
 - 1. All corings shall be done in such manner as to avoid damage to the cast footing. Where feasible, sleeved embedments or cast-in-place embedments are preferred. All proposed corings shall be discussed with the Landscape Architect prior to casting the footings.
- E. Place concrete around posts in a continuous pour, tamp for consolidation. Check each post for vertical and top alignment and hold in position during placement and finishing operation. All posts to be plumb.

3.2 TUBULAR STEEL FENCING & GATE

- A. Preparation: All new installation shall be laid out by the contractor in accordance with the construction plans.
- B. Fence Installation: Fence post shall be spaced according to Drawings, plus or minus $\frac{1}{2}$ ". For installations that must be raked to follow sloping grades, the post spacing dimension must be measured along the grade. Fence panels shall be attached to posts with brackets supplied by the manufacturer. Posts shall be set in concrete footers having a minimum depth of 36". The "Earthwork" and "Concrete" sections of this specification shall govern material requirements for the concrete footer. Posts setting by other methods such as plated posts or grouted core-drilled footers are permissible only if shown by engineering analysis to be sufficient in strength for the intended application.
- C. Installation Maintenance: When cutting/drilling rails or posts adhere to the following steps to seal the exposed steel surfaces:
 - 1. Remove all metal shavings from cut area.
 - 2. Apply zinc-rich primer to thoroughly cover edge and/or hole; let dry.
 - 3. Apply 2 coats of custom finish paint matching fence color.
 - 4. Failure to seal exposed surfaces per steps a-c above may negate warranty. Manufacturer's provided spray cans or paint pens shall be used to prime and finish exposed surfaces; it is recommended that paint pens be used to prevent overspray. Use of non-manufacturer parts or components may negate the warranty.
- D. Gate Installation: Gate posts shall be spaced according to the manufacturer's gate drawings, dependent on standard out-to-out gate leaf dimensions and gate hardware selected. Type and quality of gate hinges shall be based on the application weight, height, and number of gate cycles. The manufacturers' gate drawings shall identify the necessary gate hardware required for the application. Gate hardware shall be provided by the manufacturer of the gate and shall be installed per manufacturer's recommendations.
- E. Waste disposal: Comply with all regulations regarding handling, storage, and disposal of all hazardous materials and waste. Consult local agencies or disposal companies for individual instructions and requirements. Improper disposal of paint

and their related materials is illegal and may result in large fines. Please comply with all regulations and minimize waste whenever possible.

- F. Cleaning: The contractor shall clean the jobsite of excess materials; post-hole excavations shall be scattered uniformly away from spots.

3.3 STANDARDS AND COMPLETION

- A. Upon completion, the contractor(s) shall remove and properly dispose of all construction debris, surplus materials, and empty containers, and leave the site in a condition acceptable to the Owner.

END OF SECTION

SECTION 32 33 00 SITE FURNISHINGS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the work under this Section.
- B. All references to products by manufacturer, trade name or performance Specifications bearing the connotation "or Approved Equal" shall be as determined by the Landscape Architect and the Town, per MGL c. 30 s. 39M, part b, criteria 1.

1.2 WORK INCLUDED

- A. Provide all labor, equipment, implements and materials required to furnish, install, construct and perform all site improvements complete as shown on the Drawings and specified herein.
- B. To be included, but not limited to the following:
 - 1. 6' Backless Metal Bench;
 - 2. 6' Backed Metal Bench;
 - 3. Interpretive Sign;
 - 4. Bike Rack;

1.3 REFERENCES

- A. Examine all other Sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of other trades. Cooperate with all trades and all departments of the Town and coordinate all work under this Section therewith.
- B. The following related items are included under the Sections listed below:
 - 1. Section 02 41 00 - Site Preparation and Demolition
 - 2. Section 31 00 00 - Earthwork
 - 3. Section 32 10 00 - Bases, Ballasts, Paving, and Edging
 - 4. Section 33 10 00 – Water Utilities

1.4 SUBMITTALS AND SHOP DRAWINGS

- A. Electronically submit shop drawings, product literature, catalog cuts and / or samples for all items indicating material characteristics, fabrications, details of construction, connections and relationship with adjacent construction, called for on the Drawings and as specified and in accordance with applicable requirements under Division 1.
- B. Take field measurements prior to preparation or shop drawings and fabrication. Allow sufficient time for shop drawing review and approval, before fabricating or ordering.
- C. Electronically submit shop drawings, product literature, catalog cuts and / or samples for all items indicating material characteristics, fabrications, details of construction, connections and relationship with adjacent construction, called for on the Drawings and as specified and in accordance with applicable requirements under Division 1.

- D. Do not order materials or begin installation of Work of this Section until Owner's / Landscape Architect's approval of submittals has been obtained. Delivered materials shall closely match approved samples.

1.5 SAMPLES

- A. Initial Selection Samples: Submit samples showing complete range of colors, textures and finishes available for each material used.
- B. Verification Samples: Submit representative samples of each material that is to be exposed in the finished work, showing the full range of color and finish variation expected.

1.6 PRODUCT LITERATURE

- A. For each product or material used, submit manufacturer's product data, including installation instructions, use, limitations and recommendations.

1.7 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in manufacturer's original unopened and undamaged packages and containers with labels legible and intact.
- B. Store and handle materials in accordance with manufacturer's instructions. Prevent damage and deterioration of products from the environment and construction operations.
- C. Handle in accordance with manufacturer's instructions

1.8 JOB CONDITIONS

- A. Examine all surfaces to receive site improvements to see that they are in proper condition to receive the Work specified. Report to the Engineer in writing all unacceptable areas. All defects resulting from use of accepted surfaces shall be corrected by the appropriate Contractor at no additional expense to the Owner.
- B. Start of Work under this Section shall constitute acceptance of the site conditions to which this Work is to be applied. Site preparation shall be of proper approved quality. Any defects in Work resulting from such conditions shall be corrected under this Section, at no extra cost to the Owner.
- C. Environmental Requirements: Contractor shall not Work on or with soils when they are dry, wet, or frozen. Field Test: Form soil in palm of hand; if soil retains shape and crumbles upon touching, then it may be worked (if it will not retain its shape, it is too dry; if it does not crumble, it is too wet). Landscape Architect shall be final authority on condition of soil.

1.9 DEFINITIONS

- A. The following items are included herein and shall mean:
 - 1. A.S.T.M. - American Society for Testing and Materials. The following standard specifications are applicable to the associated items as listed.
 - a. A 36: Specifications for Structural Steel.
 - b. A 48-83: Specifications for Gray Iron Castings.
 - c. A 153...Zinc Coating (hot-dip) on hardware
 - d. A 307: Specifications for Unfinished Bolts and Nuts.

- e. A 446, GRADE A: Specifications for Steel Sheet.
- f. A 500-501: Specifications for Structural Tubing.
- 2. CPSC - Consumer Product Safety Council.
- 3. ADA - Americans with Disabilities Act and its current regulations.
- 4. AWS: American Welding Society
- 5. SSPS: Steel Structures Painting Council

1.10 WARRANTIES

- A. Attention is directed to provisions of the CONDITIONS OF THE CONTRACT and applicable parts of Division 1 regarding guaranties and warranties.
- B. Manufacturers shall provide their standard guaranties for Work specified in the Section. However, such guaranties shall be in addition to and not in lieu of all other liabilities which manufacturers and Contractor may have by law or by other provisions of the Contract Documents.

1.11 QUALITY ASSURANCE

- A. Comply with applicable codes, ordinances and regulations. Provide products of acceptable manufacturer's which have been in satisfactory in similar service for three years. Use experienced installers.

PART 2 - PRODUCT

2.1 6' BACKLESS METAL BENCH

- A. 6' Backless Metal Benches to be 6' Premier Backless Bench with Arms by Masscor of 50 Maple Street Milford, MA 01757 or Approved Equal.
- B. All metal to have a powder coat finish. Color to be black.
- C. Contractor shall touch up any scratches or other marks to surfaces and finishes.

2.2 6' BACKED METAL BENCH

- A. 6' Backed Metal Benches to be 6' Premier Backless Bench with Arms (Model MPBPR) by Masscor of 50 Maple Street Milford, MA 01757 or Approved Equal.
- B. All metal to have a powder coat finish. Color to be black.
- C. Contractor shall touch up any scratches or other marks to surfaces and finishes.

2.3 INTERPRETIVE SIGN

- A. Interpretive Sign Frame to be "NPS-C45-NPS Style Cantilever Pedestal" by Fossil Industries of 44 Jefyn Boulevard Deer Park, NY 11729, or Approved Equal. Frame and sign to be provided by the same manufacturer.
- B. Frame finish to be polyester powder-coated; color to be selected by Landscape Architect from manufacturer's standard colors.
- C. Sign panel to be a 1/8" thick custom high-pressure-laminate panel or fiberglass-embedded graphic panel with digitally printed graphics, with UV-resistant coatings or materials. Submit signage panel specifications for approval.

1. CHPL graphic sign material is composed of several layers of phenolic resin impregnated kraft filler paper, a digitally imaged graphic, a layer of melamine resin, surfaced by a layer of translucent exterior UV / graffiti overlay protection.
2. The entire panel, including exterior overlay, must be bonded under heat and extreme pressure to form a composite panel.
3. The finish must be smoothly textured with reflectivity of 30 + or - 5 gloss units.
4. The CHPL graphics must be warranted for a minimum of 10 years against fading, de-lamination and weather deterioration. There should be no warranty requirements for an annual application of water sealant, no exclusions for panels used in "extreme temperatures" and no clause that warranties can be denied due to "improper maintenance".
5. Panels must be able to be cleaned with any solvent and not restrict use of products containing lacquer thinner or acetone.
6. All cutting and finishing to be done using a CNC router.
7. Graphics must be made using 12-Color High Definition printing technology. Vendor shall provide a sample from a supplied file to confirm quality.
8. Fiberglass-embedded graphic panels meeting the above finish and warranty requirements are also acceptable.

2.4 BIKE RACK

- A. Bike rack to be "U Post Bike Rack" by Masscor, of 50 Maple Street Milford, MA 01757 or Approved Equal.
- B. Mounting: Bike rack should be embedded in a concrete footing as shown on the detail.
- C. Finish: Galvanized with powder coat finish, color to be selected by Landscape Architect.

PART 3 - EXECUTION

3.1 6' BACKLESS METAL BENCH

- A. Install as shown in Drawings and per Manufacturer's instructions. Contractor to touch up any scratches and all mars to surfaces or finishes.

3.2 6' BACKED METAL BENCH

- A. Install as shown in Drawings and per Manufacturer's instructions. Contractor to touch up any scratches and all mars to surfaces or finishes.

3.3 INTERPRETIVE SIGN

- A. Install as shown in Drawings and per Manufacturer's instructions. Contractor to touch up any scratches and all mars to surfaces or finishes.
- B. Panel must be installed in a frame with back support.

3.4 BIKE RACK

- A. Install as shown in Drawings and per Manufacturer's instructions. Contractor to touch up any scratches and all mars to surfaces or finishes.

END OF SECTION

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SECTION 32 90 00 PLANTING AND LAWNS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions of the Contract and Division 1 General Requirements apply to the work under this Section.
- B. The Work of this section is integral with the whole of the Contract Documents and is not intended to be interpreted outside the context. This Section consists of the provision of all materials, labor, equipment and the like for the complete execution of all planting and lawn establishment and related items as indicated on the Drawings and/or as specified herein.
- C. All references to products by manufacturer, trade name or performance Specifications bearing the connotation "or Approved Equal" shall be as determined by the Landscape Architect and the Town, per MGL c. 30 s. 39M, part b, criteria 1.
- D. Contractor shall comply with all laws, regulations, and quarantines for agricultural and horticultural products.

1.2 WORK INCLUDED

- A. The principal Work of this Section consists of all planting work, including the provision of all materials, labor, equipment, services and incidentals necessary to complete all of the Work in accordance with the Contract Documents, and the like for the complete execution of all planting and related items, as indicated on the Drawings and/or as specified herein and includes, but is not limited to the following:
 - 1. Topsoil (loam borrow), Fine Grading and Loaming;
 - 2. Soil Additives;
 - 3. Grass Seed;
 - 4. Maintenance and protection of new lawns, until final acceptance.

1.3 SPECIAL CONDITIONS

- A. No burning will be permitted on the project site.
- B. Prior to commencement of Work, the Contractor shall submit a plan for legal disposal of removed materials, acceptable to the Owner.

1.4 REFERENCES

- A. Examine all other Sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of other trades. Cooperate with all other trades and all departments of the Town of Maynard and coordinate all work under this Section therewith.
- B. The following related items are included under the Sections listed below:
 - 1. Section 02 41 00 – Site Preparation and Demolition
 - 2. Section 31 00 00 – Earthwork - Clearing, Excavation, Filling and Grading
 - 3. Section 31 31 19 – Invasive Vegetation Management

1.5 SUBMITTALS AND PRODUCT LITERATURE

- A. Prior to ordering the below listed materials, submit representative samples to Landscape Architect for selection and approval, in accordance with requirements of General Condition and special provisions as follows. Do not order material until Landscape Architect's approval has been obtained. Delivered materials shall closely match the approved samples.
- B. For each product or material used, submit manufacturer's product data, including installation instructions, use, limitations and recommendations.
- C. Submit the following samples:
 - 1. Topsoil: The Contractor shall provide a one (1) cubic foot representative sample from each proposed source for testing and approval as directed by the Landscape Architect. The Contractor shall deliver samples to testing laboratory prior to any loaming and shall have the testing report sent directly to the Landscape Architect, and pay all costs.
 - a. Mechanical and chemical (pH soluble salts) analysis shall be by public extension service agency or a certified private testing laboratory in accordance with the current standards of the Association of Official Agricultural Chemists and approved by Landscape Architect.
 - b. Report shall be submitted at least one (1) month before any loaming is to be done. Soil tests shall be for Nitrate Nitrogen, Ammonium Nitrogen, Phosphorus, Potassium, Calcium, Aluminum, Soluble Salts and Lead, and show acidity and USDA classification of the soil.
 - c. Report shall include recommendations based on the analysis and the proposed planting plan.
 - 2. Pine Bark Mulch: Submit a sample
 - 3. Submit material specifications and installation instructions where applicable attesting that soil additives, fertilizer, and lime, meet the requirements specified.
 - 4. Seed specifications.
 - 5. Submit information on hydroseeding machinery.

1.6 PRODUCT DELIVERY AND HANDLING

- A. All topsoil, whether from stockpiles on site or loam borrow, shall be stored in piles not to exceed six feet in height, and shall not be handled when frozen or not in a friable condition.
- B. Delivery
 - 1. Each shipment shall be certified by State and Federal Authorities to be free from disease and infestation. Any inspection certificates required by law to this effect shall accompany each shipment invoice or order of stock and on arrival, the certificate shall be filed with the Landscape Architect in charge.
 - 2. All grass seed shall be delivered in standard size bags of the vendor, showing weight, analysis, and name of vendor, and shall be delivered and stored in such manner that its effectiveness will not be impaired. All seed shall be delivered and handled so as to meet all product requirements at the time it is put in place.

C. Inspection

1. Inspection may be made before digging if the Landscape Architect directs, but no Plant Material shall be planted by the Contractor until inspected by the Landscape Architect at the site of the work. Cost of inspection shall be included in the price bid. All rejected material shall be immediately removed from the site and replaced with acceptable material at no additional cost. Final inspection shall be made upon completion of the contracts.

1.7 DEFINITIONS

A. The following related items are included herein and shall mean:

1. SSHB: The Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, latest edition
2. AOAC: Association of Official Agricultural Chemists
3. AAN: American Association of Nurserymen

1.8 CERTIFICATE OF ACCEPTANCE AND GUARANTEE FOR PLANTINGS

- A. Upon completion of all plantings, and following written verification by the Landscape Architect, the Contractor shall maintain all lawns for ninety (90) days or through the end of the growing season, whichever comes later. After the maintenance period, the Contractor shall request of the Landscape Architect, in writing, an inspection to determine whether the plant material is acceptable. If the plant material and workmanship are acceptable, written notice will be given by the Landscape Architect to the Contractor stating that the guarantee period begins from the date of the Certificate of Acceptance.
- B. All lawns to be guaranteed for one (1) year from date of substantial completion. Any lawn replacement shall come with a new one (1) year guarantee
- C. At the end of the guarantee period, inspection will be made again. Any lawn required under this contract that is dead or unsatisfactory shall be removed from the site. Each plant shall show at least 75% healthy growth and shall have the natural character of the plant of its species in accordance with American Nurserymen's Association Standards. These plants shall be replaced during the normal planting season, until the plants live through one year. A final inspection for acceptance will be made after the replacement plantings have lived through one (1) year.

1.9 EXAMINATION OF SITE CONDITIONS

- A. All areas to be planted shall be inspected by the Contractor before starting work and any defects shall be reported to the Landscape Architect prior to beginning this work. The commencement of work by the Contractor shall indicate his acceptance of the areas to be planted and he shall assume full responsibility.

1.10 ENVIRONMENTAL REQUIREMENTS

- A. Contractor shall not work on or with soils when they are dry, wet, or frozen. Field Test: Form soil in palm of hand; if soil retains shape and crumbles upon touching, then it may be worked (if it will not retain its shape, it is too dry; if it does not crumble, it is too wet). Landscape Architect shall be final authority on condition of soil.

1.11 PROTECTION

- A. The Contractor shall be liable for any damage to property caused by the work, and all areas disturbed shall be returned to their original condition to the satisfaction of the Landscape Architect. During all work of this section, the Contractor shall protect all site improvements from contact with agricultural chemicals, soil amendments, and fertilizers.
- B. The Contractor shall provide all erosion, sedimentation, and environmental controls necessitated by site and governing codes.
- C. Damage no plant to remain by burning, by pumping of water, by cutting of live roots or branches, or by any other means. No plant to be saved shall be used for crane stays, guys, or their fastenings. Vehicles shall not be parked within the dripline of trees to remain, or wherever damage may result to trees to be saved. Construction material shall not be stored beneath trees to be saved.

1.12 QUALITY ASSURANCE

- A. Qualifications: Planting shall be performed only by a certified landscape contractor with experienced workmen familiar with planting procedures and under the supervision of a qualified supervisor. Contractor shall have a minimum of five (5) years experience with Work similar in nature and scope to this Section.

1.13 WARRANTIES

- A. All trees to be guaranteed for one (1) year from date of substantial completion. Any replacement material shall come with a new one (1) year guarantee.
- B. Manufacturers shall provide their standard guaranties for work specified in the Section. However, such guaranties shall be in addition to and not in lieu of all other liabilities which manufacturers and Contractor may have by law or by other provisions of the Contract Documents.

PART 2 - PRODUCTS

2.1 TOPSOIL (LOAM BORROW)

- A. Loam shall be a "fine sandy loam" or a "sandy loam" determined by mechanical analysis and based on the USDA classification system. It shall be of uniform composition, without admixture of subsoil. It shall be free of stones greater than one inch, lumps, plants and their roots, debris and other extraneous matter over one inch in diameter or excess of smaller pieces of the same materials as determined by the Landscape Architect. It shall not contain toxic substances harmful to plant growth. It shall be obtained from naturally well drained areas which have never been stripped before and have a history of satisfactory vegetative growth. Loam shall contain not less than 4% nor more than 10% organic matter as determined by the loss on ignition of oven-dried samples. Test samples shall be oven-dried to a constant weight at a temperature of 230 F, plus or minus 9.
- B. Loam shall provide a rich, organic layer of planting soil that is also well-drained. Loam shall be a mixture of topsoil, compost and sand.
- C. Loam shall have an acidity range of pH 5.6 to pH 6.5.
 - 1. The amount of either sulfur or limestone required to adjust the planting loam to the proper pH range (above) shall be determined by the Landscape Architect on the basis of soil tests as specified herein.

2.2 SOIL ADDITIVES

- A. Commercial fertilizer, humus or other additives shall be used to counteract soil deficiencies as recommended by the soil analysis and as directed by the Landscape Architect.
1. Commercial fertilizer shall be a product complying with the State and United States Fertilizer Laws. Deliver to the site in the original unopened containers which shall bear the manufacturer's Certificate of Compliance covering analysis which shall be furnished to the Landscape Architect. At least 50% by weight of the Nitrogen content shall be derived from organic materials. Fertilizer shall contain the percentages of weight of ingredients as follows, or as recommended by the soil analysis when that is significantly different:

<u>Nitrogen</u>	<u>Phosphorus</u>	<u>Potash</u>	
10%	10%	10%	For all plants

- B. Ground dolomite limestone shall be an approved agricultural limestone containing not less than 85% of total calcium or magnesium carbonates. Limestone shall be ground to such fineness that 50% will pass through a 100 mesh sieve and 90% will pass through a 20 mesh sieve.
- C. Humus shall be natural humus, reed peat or sedge peat. It shall be free from excessive amounts of zinc, low in wood content, free from hard lumps and in a shredded or granular form. According to the methods of testing of A.O.A.C., latest edition, the acidity range shall be approximately 5.5 pH to 7.6 pH and the organic matter shall be not less than 85% as determined by loss on ignition. The minimum water absorbing ability shall be 200% by weight on an oven-dry basis.
- D. Superphosphate: Superphosphate shall be composed of finely ground phosphate rock as commonly used for agricultural purposes containing not less than 18% available phosphoric acid.
- E. Water retention gel shall be used. Mix with soil per manufacturer's directions.

2.3 GRASS SEED

- A. Grass seed for lawn areas shall be fresh, clean, dry, new crop seed, which meets the standard of the Federal Seed Act. Seed shall be mixed in proportion by weight and testing the minimum percentages of purity and germination. Seed shall be nursery grown seed composed of grasses grown from the following seed mixtures.

Lawn areas:

Approx % by Wt	Common Name of Grass	% Germination
70	Tall Fescues	92
20	Perennial Rye grass	92
10	Kentucky Bluegrass	85

- B. Weed seed shall not exceed 0.1% by weight. Tall Fescue shall be a mix of "Tonto," "Montana," "Dorado," or similar cultivar tall fescues. Bluegrass shall be "Madison," "Deepblue," "Prosperity," or similar cultivar Kentucky bluegrass. Perennial Rye shall be "Frontier," "Singular," or similar cultivar Perennial Ryegrass.
- C. Seed Mix shall be "Black Beauty Ultra" by Jonathan Green Co. of Reading, PA or Approved Equal.

2.4 BARK MULCH

- A. Mulch shall be undyed pine bark aged a minimum of six (6) months. The mulch shall be naturally dark brown in color, free of chunks and pieces of wood thicker than one-quarter inch (1/4"). Mulch must be free of stringy material over three inches (3") in length and shall not contain, in the judgment of the Landscape Architect, an excess of fine particles.
- B. Mulch shall be 98% organic matter with the pH range of 3.5 to 4.5. Moisture content of packaged material shall not exceed 35%.
- C. Submit sample for the Landscape Architect's approval.

2.5 WATER

- A. The Contractor shall be responsible to furnish his/her own supply of water to the site at no extra cost. If possible, the Owner shall furnish the Contractor upon request with an adequate source and supply of water at no charge. However, if the Owner's water supply is not available or not functioning, the Contractor shall be held responsible to furnish adequate supplies at his own cost. All work injured or damaged due to the lack of water, or the use of too much water, shall be the Contractor's responsibility to correct. Water shall be free from impurities injurious to vegetation.

2.6 PROTECTIVE FENCING

- A. Protect existing trees with a barrier constructed of wooden (2x4)'s as shown in the Drawings.

PART 3 - EXECUTION

3.1 FINE GRADING AND LOAMING

- A. After existing pavement has been removed, existing vegetation has been either removed and stockpiled for transplant or removed, scarify subgrade, remove compacted areas and then spread loam mix.
- B. After the areas to be loamed have been brought to subgrade, and immediately prior to dumping and spreading the loam, the subgrade shall be loosened by disking or rototilling to a depth of at least three inches (3") to permit bonding of the loam to the subsoil. Remove all stones greater than two inches (2") and all debris or rubbish. Such material shall be removed from the site.
- C. Loam shall be placed and spread over approved areas to a depth sufficiently greater than six inches (6") so that after natural settlement and light rolling, the completed work will conform to the lines, grading and elevations indicated. Supply additional loam, after testing and approval, as may be needed to give the specified depths and finished grades under the contract without additional cost to the Owner.
- D. No subsoil or loam shall be handled in any way if it is in a wet, dry, or frozen condition.
- E. Sufficient grade stakes shall be set for checking the finished grades. Grades shall be established which are accurate to one-tenth (1/10th) of a foot either way. Connect contours and spot elevations with an even slope.
- F. After lime, fertilizer, and humus if required have been spread and incorporated into the bed, it shall be carefully prepared by scarifying or harrowing and hand raking. All

large stiff clods, lumps, brush, roots, stumps, litter and other foreign matter, and stones over one inch (1") in diameter shall be removed from the loam. Loam shall also be free of smaller stones in excessive quantities as determined by the Landscape Architect. If lawn is to be hydroseeded, lime and fertilizer may be applied with seed.

- G. The whole surface shall then be rolled with a hand roller weighing not more than 100 lbs. per foot of width. During the rolling, all depressions caused by settlement or rolling shall be filled with additional loam and the surface shall be regraded and rolled until presenting a smooth and even finish to the required grade.

3.2 SOIL ADDITIVES

- A. Follow all recommendations for soil additives as determined by an approved Soil Testing Laboratory, and all manufacturers' instructions pertaining to additives.

3.3 HYDROSEEDING

- A. Limit of seeding shall be shown on the Drawings, in addition to all existing lawn areas on the site disturbed in the process of the Work and not replaced with another material, whether noted on the Drawings or not. All areas on the plan shall be loamed and seeded only after written approval of the finished grading or as directed by the Landscape Architect. All seeded areas are to be hydroseeded.
- B. The actual planting of seed shall be done only during periods within this season which are normal for such work as determined by weather conditions and be accepted practice in this locality. At his/her option and on his/her responsibility the Contractor may plant seed under unseasonable conditions without additional compensation, but subject to the Architect's approval as to time and methods.
- C. Planting may be done between August 15 and October 15, or between April 15 and June 15.
- D. Soil additives shall be spread and thoroughly incorporated into the layer of loam and the upper 1 inch of the underlying subsoil by harrowing or other methods approved by the Architect. The following soil additives shall be incorporated:
 - 1. Ground limestone as required by soil analysis to achieve a pH of 6.0 to 6.5.
 - 2. Fertilizer as required by soil analysis.
 - 3. Superphosphate at the rate of 20 lbs. Per 1,000 square feet.
 - 4. Humus as required by soil analysis.
- E. Seeding of lawns shall be done only by experienced workmen under the supervision of qualified foreman. Seeding shall consist of soil preparation, rolling, hydroseeding, weeding, fertilizing, watering and otherwise providing all labor and materials necessary to secure the establishment of acceptable turf.
- F. The soil on which the seed is spread shall be reasonably moist and shall be watered, if directed by the Architect. The seeded areas shall be watered evenly and at a rate of 5 gallons per square yard, unless otherwise directed by the Architect.
- G. Contractor shall place and maintain barriers (in a neat condition) around hydroseeded areas to keep people off during the first sixty (60) days.
- H. The application of grass seed, fertilizer, limestone, and a suitable wood fiber or other mulch shall be accomplished in one operation for hydroseeding.
- I. Hydroseeding shall be done by use of an approved spraying machine, which shall be operated only by personnel thoroughly familiar with this type of seeding operation.

- J. Prior to starting work, Contractor shall furnish the Architect with a certified statement as to the number of pounds of materials to be used per 100 gallons of water and the number of square feet to be covered with the quantity of solution in the hydroseeder.
 - 1. Materials shall be mixed with water in the machine and kept in an agitated state in order that the materials may be uniformly suspended in the water.
 - 2. Solution shall be sprayed evenly over the area so that resulting deposits of all materials shall equal the required rates.
 - 3. Spraying equipment shall be thoroughly cleaned and flushed prior to start of work and after every ten acres.
 - 4. When inoculum is required, if the inoculum is left in the solution with fertilizer for longer than thirty minutes, a fresh charge of inoculum shall be added to the mixture.

3.4 BARK MULCH

- A. Contractor shall install approved bark mulch material to the limits and depths shown on the Drawings and specified herein.

3.5 MAINTENANCE AND PROTECTION OF LAWNS

- A. During construction, Contractor is responsible for mowing all of the existing lawn within the Limit of Work shown on the drawings. This includes the portion of lawn within the no cut / no fill zone.
- B. Maintenance shall begin immediately after an area is planted and shall continue until final acceptance. The minimum maintenance period shall be ninety (90) calendar days after completion of all plant installations. Watering and mowing shall be done by the Contractor for the full 90 days. If 90 day period has not elapsed before watering, mowing, and maintenance must stop due to cold weather, the remaining days of the maintenance period will be fulfilled when the growing season begins the following spring.
- C. Maintenance shall consist of keeping the grass in a healthy growing condition and shall include replacements, watering, weeding, cultivating, fertilizing, re-seeding, and mowing,
- D. Contractor shall warrantee lawn for one (1) year after acceptance.
- E. Protection: Seeded areas shall be protected against trespassing and damage of any kind. This shall include the provision and installation of approved temporary fencing if necessary. If any lawn becomes damaged or injured by vandalism or neglect prior to provisional acceptance, the Contractor shall treat or replace them at his own expense.
- F. Watering of Lawn Areas:
 - 1. First week: The Contractor shall provide all labor and arrange for all watering necessary for rooting of the seed. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantity to maintain moist soil to a depth of at least 4 inches. Watering shall not be done during the heat of the day to help prevent wilting.
 - 2. Second and Subsequent weeks: The Contractor shall water the lawn as required to maintain adequate moisture, until final acceptance, in the upper 4 inches of soil.

3. Watering shall be done in a manner that will provide uniform coverage, prevent erosion due to application of excessive quantities over small areas, and prevent damage to the finished surface by the watering equipment. The Contractor shall furnish sufficient watering equipment to apply one (1) complete coverage to the lawn areas in an eight (8) hour period.
- G. Mowing: The first mowing of lawn areas shall not be attempted until the seed is firmly rooted and secure in place. Not more than 40% of the grass leaf shall be removed by initial or subsequent mowings. Grass height shall be maintained between 2 inches and 2-1/2 inches unless otherwise specified. Thereafter grass shall be maintained at 2 inches until acceptance.
- H. Fertilizing: A second application of fertilizer, as specified herein, shall be applied approximately 6 weeks after the seed has been installed as directed by the Landscape Architect. Fertilizer shall be applied at the rate of 10 pounds per 1,000 square feet.
- I. Erosion Control: Contractor is responsible for soil stabilization while lawns are being established. Erosion control methods include mulching and installation of biodegradable mesh.

3.6 FINAL ACCEPTANCE OF LAWN AREAS

- A. Contractor is to maintain all lawn upon installation. Ninety day maintenance period begins after all lawn has been planted. After the 90 day maintenance period, lawn areas will be reviewed for final acceptance.
- B. Conditions of Final Acceptance
 1. Lawn acceptance shall be given for entire completed lawn area. No partial acceptance shall be given.
 2. Lawns shall exhibit uniform, thick, well-developed stand of grass. Lawn areas shall have no bare spots.
 3. No lawn areas or plant beds shall exhibit signs of damage from erosion, washouts, gullies, or other causes.
 4. Pavement surfaces and site improvements adjacent to lawn areas and plantings shall be clean and free of spills from placing or handling of loam borrow and seeding/planting operations.
- C. Inspection and Final Acceptance
 1. Upon completion of 90 day maintenance period, the Contractor shall request the Landscape Architect's review to determine if work is acceptable.
 - a. If work is not accepted, Landscape Architect will issue a written list of outstanding work. Maintenance period to be extended until completion of work.
 - b. Contractor shall notify Landscape Architect when outstanding work is completed and ready for review. When work is complete, as determined by Landscape Architect, a letter of Final Acceptance will be issued.

END OF SECTION

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